

```

# NUMBERS & ODDITIES #
//////////////////////////////////// \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
- Editor: Ary Boender      *****      e-mail: ary@luna.nl -
- Nickname on IRC channels #wun #monitor #numbers: Ary-B -
----- Co-editors -----
- Voice stations: Chris Smolinski <cps@access.digex.net> -
- Loggings: Jascha Ruessler <znn0000000@hotmail.com> -
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\

```

-::: N&O #10 :::-

Hi and welcome to the first N&O in 1999. This month I have a couple of interesting items for you, a lot of logs, the revised ENIGMA control list and the final edition of Toby's crypto series.

Unfortunately I have very little time these days, so I fully depend on your contributions. Please note that my current situation will last for at least 5 more months. I cannot guarantee that there will be a N&O next month unless you supply me with info.

I recently had the opportunity to visit Bletchley Park in the UK. This was the place where wartime codebreaking was done. During WWII over 10000 people worked here with only one goal: to break the codes of the Germans and their allies. There is a lot of old military stuff in the museum. Especially the Cryptology Trail is interesting. You can even work with a real Enigma crypto machine. If you are in the neighbourhood you really should visit the place. Check for more info and their opening times Bletchley's website at www.cranfield.ac.uk/CCC/BPark.

Mathias Kropf sent me a press release re the activity of clandestine stations. Although clandestine stations are neither utility stations nor number stations, there is a definite link to our 'branch' of the hobby, namely JAMMERS. Many clandestines are being jammed by the target countries. An increase of clandestine broadcasting hours almost always means an increase of jamming activity. To give you an idea about the number of clandestines and their target areas, I decided to include the press release in this N&O edition.

* Press Release *

1998 Clandestine Activity Survey

Clandestine activity on shortwave decreases for the sixth year in a row; 19 target areas remain still active. In 1998 the activity of political clandestine stations on shortwave has decreased by 16% to 1223 Weekly Broadcasting Hours (WBHs). This is the result of the latest

Clandestine Activity Survey which has been published annually since 1986. From its high in 1990 with 2284 WBHs the activity has now dropped by almost 50%.

Activity on the Asian continent has decreased by 9% to 876 WBHs in 1998, on the American continent the activity has increased by 6% to 190 WBHs, while on the African continent the activity has dropped by 55% to now only 143 WBHs.

When compared with 12 months ago, the number of active target areas (countries) has decreased by two to 19. While there are no longer any active clandestine stations broadcasting to Cambodia, Guatemala and Angola, Papua New Guinea has once again been listed as active (after a one year break).

The three most active target areas worldwide are now Iraq with 292 WBHs (+38 when compared with last year), North Korea with 238 WBHs (unchanged) and Cuba with 162 WBHs (unchanged).

*** End of Press Release ***

* LOCATIONS *

Swedish Rhapsody [E23] on 6507 & 8188 originate from ca 80km WSW of Warsaw, Poland.

XPB transmits not only from near Smolensk but also from Moscow.

One that I forgot to mention last time: 8BY [M16] transmits from St. Asis, France

* MORSE STATIONS *

::: M51

In addition to frequencies mentioned in last month's profile, M51 has been heard on the following additional frequencies: 3687, 3692, 3957, 4487, 4528, 5018, 5095, 5123.5, 5127, 5130, 5134, 5279, 5428, 5432, 5740, 5908, 5911, 6862.5, 6876, 6886, 6931 & 7473 kHz

::: M76

Still active. Daily on 3819 kHz at 1750 UTC.

* VOICE STATIONS *

::: Cherry Ripe [E04]

Simon Denneen checks in from Australia with a Cherry Ripe sked. Simon

thinks that it is not complete and (like me) he wants to know if someone can help to complete the list.

Revised Cherry Ripe (E4) Schedule

1000Z	20474//23461
1100Z	17499//23461
#1200Z	17499//20474//23461
*1900Z	17499//22108
2200Z	17499//?????
2300Z	17499//22108
2400Z	17499//22108
0100Z	19884//21866

According to Simon's loggings E4 is definitely active on 17499 at 1200 UTC but he was unable to receive anything at this time on either 20474 or 23461, probably due to nighttime propagation, yet Takashi Yamaguchi (who is probably in the best position to definitively monitor this station) of Japan logged it on 20474//23461 but not 17499. Whether this is a printing error remains to be seen but it does suggest that monitors should be on the lookout for a third simulcast frequency at a given time, which was previously the norm for this station.

* The 1900 UTC log also comes from Takashi's loggings in RD Baker's column (February 1999 edition) which suggests a check of the known operating frequencies at 1900, 2000, 2100 and 2200 UTC could help to expand knowledge of the station's new broadcast schedule.

Comments or additional freqs/times are most welcome. Send them to Simon <porbeagle@ozemail.com.au> or me, or to the list please.

::: Israeli intelligence [E10]

Costas copied E10 with a special message on 6 Jan at 0745 UTC on 6658 kHz: VLB2 6P3 6R1 881

::: English Man or Lady???

Darren reported an unid 'English Man' on 10240 kHz at 1400 and 1500 UTC. Some say that it is the English Lady but Darren sez that she sure sounds like a bloke :-). Try it and let me know what you think!

::: The Pip

Maritime navigation systems expert Vaino Lehtoranta checked the pip's signal and contacted me with a very interesting remark:

''...frequency is 3756 kHz with much reduced carrier. It is modulated by tone which spreads up and down symmetrically in about 0.82 kHz steps. Because this is exactly what Bras and Rs-10 transmit, these must have something to do with those systems. A control station? Some people long

thought they are time signal stations without knowledge that the transmitted "time period" is not 1 second....''

Note that BRAS and RS-10 are Russian radio navigation systems much like the western Decca and Hyperfix systems.

Rimantas Pleikys noted another voice message transmitted by the 'Pip' station on 13 Jan. at 07:38 UTC, on 5448 kHz. The message was repeated 3 times and was read out live by a male in Russian: "Dlia (For) 014, 071, 206, 500, 634, 850. Kak slyshno? Priyom." (How can you read me? Reception). Sounded in the military style. At 07:39 back to pips. No answer heard on this frequency.

Rimantas sez that the current schedule of this channel marker is as follows:

5448 kHz 5:30-14:00 UTC
3756 kHz 14:00- 5:30 UTC

There are at least 2 transmitters in use, because usually the both frequencies are active simultaneously during the day/night channel change.

Thanks for the info guys!

::: Unid voice stations

Mike sent me the following note:

A strange one heard on Thurs 31 Dec 98, start 18.45z, end 18.50z, 6646 kHz nominal, Russ, YL/OM??. Heavy TX'er hum, poor stability - varied by 3k. Readable only by changing AM/USB/LSB.

Intro "Tri-Dva-Tri" x 10

Then short series of 3f gps to "Dva-Svo?-Dva" x 3

Ending "Konets-Konets-Konets"

An other unid was reported by Markus in Austria on 31 Dec. Markus sez: ''At 05:15 I found something that caught my attention: On 5433 I hrd a very strong (about 9+10dB) male station in EE that kept repeating "405 000" a couple of times, then went off the air.

What was interesting is that the station sounded "Viennese"! What I mean is that the voice was not synthesized but rather digitized and - here's the interesting part - the accent strongly reminded me of somebody from Vienna or the province of lower Austria. I have relatives there and I know what they sound like when they are speaking EE (even if it is just figures).''

Could this be an English Man variant????

::: 2-letter stations [E16 / G16]

Tibor from Germany writes to tell that he has been listening to the numbers stations for 9 years now and that the 2-letter stations are his favorites. After reading the station profile in N&O#5 he noticed that he has a log in his files of a callsign that is not in the list, namely Oscar Alpha with id numbers 039 and 820. There is an Alpha Oscar in the list, Tibor. Is it possible that we are talking about this one?

Anyway, Tibor also logged a German transmission from Alpha Uniform back in 1991. AU normally only transmits in English.

::: English Man variant

Remember the English Man variant that I mentioned recently? Well, our Australian friend, Eddy Waters, heard him again on 10670 kHz. He heard only the last part of the transmission which ended at 1330 UTC.

* OTHER MODES *

::: Polytone stations [XPH]

Valeriano Martin surprised us with a decoding theory for the Polytone stations, so I gladly hand over the mike to him:

'I've almost attained to decode XPH and I would like to confirm my results, but I've not seen any post in the matter. Have anyone been able to decode it?

I have identified 14 different tones within its alphabet, with a step of 16 Hz between two correlative tones. I have initially assigned an arbitrary letter to each tone, according to this list:

Letter	Freq. (approx)
=====	=====
A	305 Hz
B	321
C	337
D	353
E	369
F	385
G	401
H	417
I	433
J	449
K	465
L	481
M	497

For instance, the sample 39 in CONET CD#2 could be written in this way:

```
AGCHADAGCHAGCHAGCHADAGCHAGCHAGCHADAGCHAGCHAGCHADAGCHAGCHAGCH
ADAGCHAGCHAGCHADAGCHAGCHAGCHADA
mnmnmnmnmnmnmnmnmnmnaaaaaaaaaa
cnegiacncehaflhenalhcfnalckefadjfchacenifaikleda
cfihcadiknkacekchadcjneacjneacfinjadgjijacdelca
fhcflaknhckaicjkgaieenhainjnlagldhkacgighadkghja
kjikgagenfhaehnjn
bnbnbnbnbnbnbnbnbnbnbn
```

And the track 42 (null message),

```
AGDCAGDCAGDCACNCAGDCAGDCAGDCACNCAGDCAGDCAGDCACNCA
mnmnmnmnmnmnmnmnmnmnaaaaaaaaaa
bnbnbnbnbnbnbnbnbnbnbn
```

Where upper case letters represent 1 sec duration and lower case 133 msec. I have noted:

- A) The scheme has four parts:
 - 1: Call up with long tones
 - 2: mn(x10) a(x10)
 - 3: Message, not present in the second sample
 - 4: bn(x10)
- B) Tones A, B, M and N seem to have special purposes:
 - B and M do not appear within the message
 - A is in position 6, 12, 18... I suppose that it is a dummy character used as group separator.
 - I think that N duplicates the previous tone (i.e. CN = CC). Note that there is no one character identical to the next.
- C) The remaining tones C-L most probably represent figures 0-9. Therefore, we have the equivalences:

A:	Space
B:	???
C:	0
D:	1
E:	2
F:	3
G:	4
H:	5
I:	6

J: 7
K: 8
L: 9
M: ???
N: Repetition

Making the appropriate substitutions, the callups turn into:

1st sample: 405 1 405 405 405 1 405 405 405 1 405 405 405 1
405 405 405 1 405 405 405 1 405 405 405 1

2nd sample: 410 410 410 000 410 410 410 000 410 410 410 000

It looks like S7, V7, M12... isn't it? Three digit group seems to be a frequency id and the single figure, the number of messages to be sent. I have checked it. For example, the call up on Friday, 8 Jan 1999 was:

GFNAGFNAGFNAEA or 433 433 433 2

And the sked: 11462kHz at 0700

^
12362 at 0720

^
13362 at 0740
^

It sent two messages, separated by something like cncncacncncacccccca (I'm not sure, the reception was not good). First and second groups in each message were ID and GC, as we can expect:

cdjihacndkh...(1110 tones)...cncncacncncaccccccc
cjcheacncjl...(474 tones)...bn(x10)

that is

01765 00185...(185 x 5fg)...000000 000000 000000
07052 00079...(79 x 5fg)...bn(x10)

Comments appreciated.'

Wow, great job Valeriano! Chris Smolinski reacted as follows:

'Very interesting results! A few thoughts...

Using a tone to indicate "duplicate" makes sense. Forcing sequential tones to be different probably helps improve the tone detection and decoding. That way, it is known when one character ends and the next begins, without having to rely just on timing.

The recording of XPH I have has some 'pulses' between each of the 'a' characters in the 'aaaaaaaaaa' sequence just prior to the start of the message text.

I wonder if these ten 'a' (305 Hz) tones sent just before the message are a sort of timing series, to get the decoder synchronized and ready to copy the message text? Likewise, the repeating "mn" series could serve to indicate that the synchronization is about to begin.

Now what we really need - a program to decode XPH messages! (Well, convert to numbers is a better term, since we're really not decoding the message text). I'll gladly do a Mac version. Anyone want to team up to work on a combined Mac/Windows program?''

This certainly is a challenge guys! Anyone for a Windows version of the program? Keep us informed please?! -Ary-

* CRYPTO QUIZ *

Apparently only one person noticed the missing part of last month's crypto quiz. For those of you who want to have the quiz complete, is here the missing part.

::: Simple substitution.

Straight forward, simple substitution without word-division. Punctuation has been spelled out.

AHHCR LRPVI AMHYV NTSUT DLHAG GYAVY SHLYF AUSKR NNAAH ASTIH
AUKYR MHCRF YADPY IIHRG HLYQL AUSYS AFFIA TFIAU SIYHH LYHVY
RKRNN ACLTK LTIHL YNATU IATFC THLRP HHLYB RUUYH IKRNN AAUSF
AQSAI LHRCA THTUD MRVSA QFTDL HMTVS AQKRN NACLY UHLYQ AVVTW
YSAHA UTIFA USRMH LYBAL ANAIH LAHCA IKAFF YSTUH LYTUS TAUH
RUDPY DPALA LAUTG AVYUI AUIAF WASRV GAVYU IHRGK LVTIH RGLYV
KRFPN BPIKR NNAZR PVUAF RMHLY MTVIH WRQAD YGAVY URKHR BYVHY
UKRNN AMRPV HYYUU TUYHQ HCRGA VYUJJ
76 GROUPS

* POLYALPHABETIC SUBSTITUTION *

by Torbjorn Andersson <tan@telia.com>
<http://hem.passagen.se/tan01/>

Table of contents

- * Introduction
- * Gronsfeld's system
- * Vigenere

* Vigenere with unordered alphabets

* Introduction

In polyalphabetic substitution the cleartext letters are enciphered differently depending upon their placement in the text. As the name polyalphabetic suggests this is achieved by using several crypto-alphabets instead of just one, as is the case in most of the simpler crypto systems. Which cryptoalphabet to use at a given time is usually guided by a key of some kind, or the agreement can be to swich alphabet after each word encrypted (which, of course, presumes that the word boundaries are kept intact or indicated in some way), but the latter is seldom practiced in real life. Several systems exists, and I shall try and explain some of the more common.

* Gronsfeld's system

One of the simplest polyalphabetic substitution ciphers is Gronsfeld's system. Gaspar Schott, a German 17-century cryptographer, tells that he was taught this cipher during a trip between Mainz and Frankfurt by count Gronsfeld, hence the name. Gronsfeld's system uses a numeric key - usually quite short - e.g. 7341, and this key is repeated, one figure at a time, above the individual letters of the cleartext, like this:

Key:	7	3	4	1	7	3	4	1	7
Text:	G	R	O	N	S	F	E	L	D

To encrypt, one simply count forwards in the alphabet from the letter to be encrypted, the number of steps given by the key figure above, the resulting letter being the crypto. If one happens to reach the last letter of the alphabet, still having remaining steps to count, one begins from the beginning of the alphabet. It helps to think of the alphabet as a ring of letters, instead of a row.

This is how the example from above will look like:

Key:	7	3	4	1	7	3	4	1	7
Text:	G	R	O	N	S	F	E	L	D
Crypto:	N	U	S	O	Z	I	I	M	K

Decryption is the reverse process. One writes out the key figures above the letters of the cryptogram and counts backwards in the alphabet instead to reach the cleartext. Gronsfeld's system can be made more secure (the original system isn't very safe, even with keys as long as the number of letters in the cleartext) against enemy decryption by using an unordered alphabet instead of the normal sequence. Since there are numerous ways to design an unordered alphabet, I will show but one method. Using the key (or, preferably, another key of one's own choosing) from the example above, the following table is constructed:

7	A	E	I	M	Q	U	Y
3	B	F	J	N	R	V	Z
4	C	G	K	O	S	W	
1	D	H	L	P	T	X	

Writing the letters out, row by row, and starting with the row having the lowest keyfigure gives the following unordered sequence:

DHLPTXBFJNRVZCGKOSWAEIMQUY

The encryption example from above will, when counting in this unordered alphabet, look like this:

Key:	7	3	4	1	7	3	4	1	7
Text:	G	R	O	N	S	F	E	L	D
Crypto:	I	C	E	R	U	R	U	P	F

* Vigenere

The most common polyalphabetic substitution cipher is the Vigenere or, as it is sometimes referred to, Trithem's system. It uses a table, usually containing 26 by 26 cells (one 18-century Swedish table uses 22 by 22 cells, and a 19-century one - also Swedish - has 56 by 56 cells, but it was probably too cumbersome to use) containing the letters of the alphabet in the following fashion:

The Vigenere Table

```

-----
ABCDEFGHIJKLMNOPQRSTUVWXYZ
BCDEFGHIJKLMNOPQRSTUVWXYZA
CDEFGHIJKLMNOPQRSTUVWXYZAB
DEFGHIJKLMNOPQRSTUVWXYZABC
EFGHIJKLMNOPQRSTUVWXYZABCD
FGHIJKLMNOPQRSTUVWXYZABCDE
GHIJKLMNOPQRSTUVWXYZABCDEF
HIJKLMNOPQRSTUVWXYZABCDEFG
IJKLMNOPQRSTUVWXYZABCDEFGH
JKLMNOPQRSTUVWXYZABCDEFGHI
LMNOPQRSTUVWXYZABCDEFGHIJ
MNOPQRSTUVWXYZABCDEFGHIJK
NOPQRSTUVWXYZABCDEFGHIJKL
OPQRSTUVWXYZABCDEFGHIJKLMN
PQRSTUVWXYZABCDEFGHIJKLMNO
QRSTUVWXYZABCDEFGHIJKLMNOP
RSTUVWXYZABCDEFGHIJKLMNOQ
STUVWXYZABCDEFGHIJKLMNOPQ
TUVWXYZABCDEFGHIJKLMNOPQR
UVWXYZABCDEFGHIJKLMNOPQRS

```

VWXYZABCDEFGHIJKLMNOPQRSTUVWXYZ
WXYZABCDEFGHIJKLMNPOQRSTUVWXYZ
XYZABCDEFGHIJKLMNPOQRSTUVWXYZV
YZABCDEFGHIJKLMNPOQRSTUVWXYZW
ZABCDEFGHIJKLMNPOQRSTUVWXYZVWXY

There are several ways to use this table, all producing ciphers with different names, such as: Standard Vigenere, Beaufort, Variant Vigenere.

* Standard Vigenere

In standard Vigenere the table is used in the following way:

First a keyword or keyphrase is agreed upon by the communicants, e.g. PYRAMID. The letters of the keyword/keyphrase are written above the plaintext to be enciphered one by one, like the keyfigures of the Gronsfeld system. If necessary, the keyword is repeated over and over till all cleartext letters have received one letter of the key. It may look like this:

Key letters: P Y R A M I D P Y R A M I D P
Cleartext: A T T A C K A T S U N D O W N

The plaintext letter is sought in the topmost row of the table and the key letter in the leftmost column of the table. At the intersection of the column under the plaintext letter and the row begun by the key letter, one will find the crypto letter. When the encryption is finished, the example above will have the following appearance:

Key letters: P Y R A M I D P Y R A M I D P
Cleartext: A T T A C K A T S U N D O W N
Crypto: P R K A O S D I Q L N P W Z C

To decipher a cryptogram in standard Vigenere, one copies the letters of the key above the letters of the cryptogram. The row begun by the first keyletter is sought in the table, and then one proceeds along this row until the cryptoletter are encountered. Next, one goes straight up from the cryptoletter to the first row, where the cleartext is found.

The reader might be interested in knowing, that standard Vigenere was the main cryptographic system used by the Confederate States during the American Civil War, and the following four key phrases used by the Confederates have survived to this day:

- * IN GOD WE TRUST
- * COMPLETE VICTORY
- * MANCHESTER BLUFF
- * and, as the war-luck turned: COME RETRIBUTION

In the excellent book *The History of Codes and Ciphers in the United States prior to World War I*, available from AEGEAN PARK PRESS, the following example of a real Confederate message is given, which the interested reader can try and decipher (the key being one of the four mentioned above):

Jackson, May 25th, 1863
Lieut. Genl. Pemberton: My XAFV. USLX was VVUFLSJJP
by the BRCYIJ 200,000 VEGT. SUAJ. NERP. ZIFM. It
will be GFOECSZQD as they NTYMNX. Bragg MJ TPHINZG
a QKCMKBSE. When it DZGJX N will YOIG. AS. QHY.
NITWM do you YTIAM the IIKM. VFVEY. How and where
is the JSQML GUGSFTVE. HBFY is your ROEEL.

J. E. Johnston

* Beaufort

In the Beaufort cipher the table is used in the following way:

o Encryption.

Locate the cleartext letter in the top row of the table. Search the column immediately under till the keyletter is found. Follow the row of the keyletter to the left. The cryptoletter is found in the leftmost column.

o Decryption.

Locate the cryptoletter in the leftmost column of the table. Search the row to the right till the keyletter is found. Go straight up from the keyletter. The cleartext is found in the top row.

The Beaufort way of using the table is somewhat easier than standard Vigenere, since you only have to follow one route instead of finding an intersection of a row and a column.

* Variant Vigenere

In Variant Vigenere the following modus operandi is used:

o Encryption.

Locate the keyletter in the leftmost column. Follow the row headed by the key letter until the cleartext letter is found. Go straight up from the cleartext letter. The cryptoletter is found in the top row.

o Decryption

Locate the cryptoletter in the top row. Locate the keyletter in the leftmost column. The cleartext is found at the intersection of the cryptoletter-column and the key letter-row.

* Vigenere with unordered alphabets

As is the case with Gronsfeld's system, the cipher produced by Vigenere will be harder to break by the enemy if unordered alphabets are used instead of the normal alphabetic sequence.

Either the mixed sequence is written down in a fashion similar to the Vigenere table above, or the mixed sequence is written on the top line and down, forming a new leftmost column, which are then used when locating the key-, cleartext, and cryptoletters.

A table using a body consisting of a mixed sequence based on the keyword SPHINX may look like this:

Vigenere Table with unordered alphabet

```
-----  
SPHINXABCDEFGJJKLMOQRTUVWYZ  
PHINXABCDEFGJJKLMOQRTUVWYZS  
HINXABCDEFGJJKLMOQRTUVWYZSP  
INXABCDEFGJJKLMOQRTUVWYZSPH  
NXABCDEFGJJKLMOQRTUVWYZSPHI  
XABCDEFGJJKLMOQRTUVWYZSPHIN  
ABCDEFGJJKLMOQRTUVWYZSPHINX  
BCDEFGJJKLMOQRTUVWYZSPHINXA  
CDEFGJJKLMOQRTUVWYZSPHINXAB  
DEFGJJKLMOQRTUVWYZSPHINXABC  
EFGJJKLMOQRTUVWYZSPHINXABCD  
FGJJKLMOQRTUVWYZSPHINXABCDE  
GJJKLMOQRTUVWYZSPHINXABCDEF  
JKLMOQRTUVWYZSPHINXABCDEFG  
KLMOQRTUVWYZSPHINXABCDEFGJ  
LMOQRTUVWYZSPHINXABCDEFGJK  
MOQRTUVWYZSPHINXABCDEFGJKL  
OQRTUVWYZSPHINXABCDEFGJKLM  
QRTUVWYZSPHINXABCDEFGJKLMO  
RTUVWYZSPHINXABCDEFGJKLMOQ  
TUVWYZSPHINXABCDEFGJKLMOQR  
UVWYZSPHINXABCDEFGJKLMOQRT  
VWYZSPHINXABCDEFGJKLMOQRTU  
WYZSPHINXABCDEFGJKLMOQRTUV  
YZSPHINXABCDEFGJKLMOQRTUVW  
ZSPHINXABCDEFGJKLMOQRTUVWY
```

The example from above will now become:

Key letters:	P	Y	R	A	M	I	D	P	Y	R	A	M	I	D	P
Cleartext:	A	T	T	A	C	K	A	T	S	U	N	D	O	W	N
Crypto:	B	Q	J	G	Y	O	L	U	Y	K	E	Z	T	A	X

When using the unordered sequence as top row and leftmost column, the

first few lines may look like this:

Vigenere Table with unordered entry alphabets

```
-----  
..sphinxabcdefghijklmnopqrstu  
s:ABCDEFGHIJKLMNPOQRSTUVWXYZ  
p:BCDEFGHIJKLMNPOQRSTUVWXYZA  
h:CDEFGHIJKLMNPOQRSTUVWXYZAB  
i:DEFGHIJKLMNPOQRSTUVWXYZABC  
n:EFGHIJKLMNPOQRSTUVWXYZABCD  
x:FGHIJKLMNPOQRSTUVWXYZABCDE  
a:GHIJKLMNPOQRSTUVWXYZABCDEF  
b:HIJKLMNPOQRSTUVWXYZABCDEFG  
c:IJKLMNPOQRSTUVWXYZABCDEFGH  
d:JKLMNPOQRSTUVWXYZABCDEFGHI  
e:KLMNPOQRSTUVWXYZABCDEFGHIJ  
f:LMNPOQRSTUVWXYZABCDEFGHIJK  
g:MNOPQRSTUVWXYZABCDEFGHIJKL  
j:NOPQRSTUVWXYZABCDEFGHIJKLM  
k:OPQRSTUVWXYZABCDEFGHIJKLMN  
l:PQRSTUVWXYZABCDEFGHIJKLMNO  
m:QRSTUVWXYZABCDEFGHIJKLMNOP  
o:STUVWXYZABCDEFGHIJKLMNOPQ  
q:STUVWXYZABCDEFGHIJKLMNOPQR  
r:TUVWXYZABCDEFGHIJKLMNOPQRS  
t:UVWXYZABCDEFGHIJKLMNOPQRST  
u:VWXYZABCDEFGHIJKLMNOPQRSTU  
v:WXYZABCDEFGHIJKLMNOPQRSTUV  
w:XYZABCDEFGHIJKLMNOPQRSTUVW  
y:YZABCDEFGHIJKLMNOPQRSTUVWX  
z:ZABCDEFGHIJKLMNOPQRSTUVWXY
```

The example now becomes:

Key letters:	P	Y	R	A	M	I	D	P	Y	R	A	M	I	D	P
Clear text:	A	T	T	A	C	K	A	T	S	U	N	D	O	W	N
Crypto:	H	S	N	M	Y	R	P	V	Y	O	K	Z	U	G	F

-O-O-O-O-O-O-O-O-O-O-

* ENIGMA CONTROL LIST (updated 20 December 1998) *

E... English language	G... German language
S... Slavic languages	V... Various languages
M... Morse and RTTY stations	X... Various modes

*) not active

Code	Brief description	Family
E01	Ready Ready YL/EE	VII
* E02	<deleted>	
E03	Lincolnshire Poacher YL/EE	X
E04	Cherry Ripe YL/EE	X
E05	Counting Station YL/EE	II
E05a	Counting Station '383' null skeds	II
E06	English Man OM/EE 00000	Ia
E06a	English Man 2 group commencing with stutter group	Ia
E06b	English Man 3FG id with 5FG group in call, 2 msgs	Ia
E07	English Man OM/EE 000 000	Ib
* E08	<deleted>	
E09	Magnetic Fields YL/EE 44D	XII
E10	Phonetic Alphabet Station YL	
E10a	VLB2 etc. variant YL	
E11	Oblique YL/EE	III
E12	NNN YL/EE	IV
* E13	5 Dashes YL/EE	V
* E14	Count Control YL/EE	II
E15	Nancy Adam Susan YL+OM	
E16	2 Letter YL/EE BND	VI
E17	English Lady. 274 00000 YL/EE	Ia
E17a	English Lady. Dual message	Ia
* E18	Fife Free YL/EE	XV
* E19	<deleted>	
E20	English Lady. Dual msg format of E17 or E6 YL/EE	Ia
* E21	4F Counting Station YL/EE	II
* E21a	American accent	II
E22	Arabic Man 2L/F (FD7, FD9)	
E23	3 messages per month 100/100/50GC	XI
E24	'Allo allo'	
* G01	Tyrolean Music Station YL+OM/GG	XVII
* G01a	Irregular tunes	XVII
* G01b	Phrases and irregular tunes	XVII
* G02	Swedish Rhapsody YL/GG	XI
* G02a	Counting in call	XI
* G03	The Gong Station YL/GG	XVII
G04	3-Note Oddity YL/GG	XIII
* G05	Counting Station YL/EE (using 'zwo')	II
* G05a	Using 'zwei'	II
G06	German Lady 00000 YL/GG	Ia
G07	German Lady 000 000 YL/GG	Ib
* G08	Four Note Rising Scale YL/GG	XVII
* G08a	4-Note. Single repeated 5FG & morse A's	XVII
* G08b	4-Note. Rapid dots tuning signal	XVII

* G09	Saxophone Piece YL/GG	
* G10	Bert Kaempfert YL/GG	III
G11	Strich YL/GG	III
G12	NNN YL/GG	IV
* G13	5 Dashes YL/GG	V
G13A	5-Dashes. 3/2 grouping	V
* G13a	5 Dashes. 3/2 grouping	V
* G14	DFC37/DFD21 YL/GG	VI
* G15	Papa November YL/GG	VI
G15A	Call read out over continuous notes	VI
* G15A	Papa November. Call read out over continuous notes	VI
G16	2 Letter Station YL/GG	VI
* G17	German Lady on 5420 kHz YL/GG	Ib
* G18	8 Note Rising and Falling	IXa
G19	German Man 00000 OM/GG (G01 voice)	Ia
* G20	Spruchnummer OM/GG (various tunes)	
* G20a	Spruchnummer. Repeating single fig group	
* G21	Music and Morse letter	
* G22	Edna Sednitser YL/GG	XV
* G23	2M8 Hitler's Birthday	
* S01	Aida	VII
S02	Drums and Trumpets	VII
S02a	S02 with bugle	VII
S02b	See X1	VII
S02c	3FG Nomer	VII
S02d	5FG Nomer	VII
* S03	Czech Words OKNO OKNO	
* S04	Edna Sednitzer. Ends with 000	XV
* S05	OLX null messages	IXb
S05a	Rapid dots. No callsign (ex S15)	IXb
S05b	OLX. No null messages (ex S16)	IXb
S06	Russian Man 00000 OM/RR	Ia
S06a	Russian Man. 55555 00000 idler	Ia
S06b	Russian Man. Two group (commencing with stuter gr)	Ia
S06b	Russian Man. Two group (commencing with stuter gr)	Ia
S06c	Russian Man. Repeating single group	Ia
S06d	Russian Man. Id + 111 call	Ia
S06e	Russian Man. Two messages	Ia
S07	Russian Man 000 000 OM/RR	Ib
S07a	Russian Man. Multiple two group	Ib
S07b	Russian Man. Multiple single group using same id	Ib
S08	Russian. YT (YL)	VIII
* S09	Polish Counting	
* S10	Czech Lady. Piano piece. Later 5 note intro	IXa
S10a	Czech. 555 idler	IXa
S10b	Czech. 5-note tuning signal	IXa
S10c	Czech. 3f id with idler	IXa

S10d	Czech. 3f id	IXa
S10e	Czech. 5f(3x) GC(3x) in call	IXa
* S11	Presta	III
S12	<deleted> now S11a	
S13	Russian Counting. 2 minute transmission	
S14	Russian Counting. Long transmissions	
* S15	<deleted> now S05a	
S16	<deleted> now S05b	
S17	Czech Lady Control	IXc
S17a	Czech Lady control. No circuit etc.	IXc
S17b	Czech Lady control. 01 group count	IXc
S17c	Czech Lady control. 313-5FG (05 GC)	IXc
* S18	Czech Man 3F 5F	IXc
* S19	Czech Man. 000 or 888-018 S17C type	IXc
* S20	Aifada	
S21	Russian Lady 342 etc.	XIV
S22	<deleted>	
S23	<deleted> was Barbara	
S24	<deleted>	
S25	Russian Man Control. Standard 40 min transmission	Ia
S25a	Russian Man. Stutter groups. Long transmissions	Ia
S25b	Russian Man. S25 with long messages	Ia
S25c	Russian Man. 615 single group (14720 kHz)	Ia
* S26	Polish. 'Zyt Zyt' (Hush hush)	III
S27	Czech Lady 2. M1C variant	XIV
S27a	Czech Lady 2. With messages	XIV
S28	Buzzer, ex-XB	
S29	Ends with 'konec konec" AAAA	IXc
* V01	Rumanian Skylark OM/RU	XVI
V01a	Skylark with additional tune	XVI
V02	Spanish Lady 2 finals 3 finals	XVIII
V02a	Spanish. Atencion. 150/150/150 GC	XVIII
V03	<deleted>	
V04	<deleted>	
V05	Spanish counting 3/2f	II
V05a	Spanish. 4FG	II
V06	Spanish Lady 00000	Ia
V07	Spanish Man 000 000	Ib
V08	Eastern Music Arabic	XII
V09	Chinese???	
* V10	Spanish. 'Stop Schlosst'	
* V10a	Spanish. Two group idler	
V11	<deleted>	
* V12	French. NNN YL	IV
V13	New Star Broadcasting	
* V14	Spanish. Count Control YL	II
V15	Korean via Radio Pyongyang	

V16	Chinese 11028 kHz	
V17	Rumanian 3F 000	Ib or XVI
* V18	Hungarian. NNN	IV
* V19	Spanish. WTR21. Don't cry for me Argentina	
V20	Spanish. Bored Man (related to V19?)	
V21	Spanish. Babbler	
V22	Chinese 2	
M01	A-network. 2 tone hand-keyed	XIV
M01a	End of the month transmission	XIV
M01b	As M01A but with message	XIV
M01c	Non-scheduled M01	XIV
M02	Ends AR Long Zero	IV
M03	/ Ends ==000	III
M03a	Sends triplets	III
M04	LOLO Long Zero	XI
* M05	6 Fig 000000 Long Zero	
* M06	OLX	IXb
M06A	Sends triplets	III
M06a	Rapid dots tuning signal	IXb
M07	Formerly Rapid Dashes MCW ends 000 + TS	IXa
M08	Cut Numbers. Ends AR AR AR SK SK SK	XVIII
M08a	Cut Numbers. 3 msgs each 150 groups	XVIII
M08b	Cut Numbers. 'de ...' callup	XVIII
* M09	<deleted>	
M10	Former Rapid Dashes. 5FG ends with = = 2FG GC 000	IXa
M10a	Triplet 000	IXa
M10b	Additional groups. Triplet 000	IXa
M10c	5FG addressees	IXa
M10d	Hand-keyed no ending	IXa
M10e	5FG addressees. Group count x3	IXa
* M11	<deleted>	
M12	5FG. Ends with 000 000	Ib
M13	5FG. Ends 3 long dashes	XV
M13a	Call (triplet) x3	XV
M14	Ends 00000 or 5 long dashes	Ia
M14a	Dual message (same id)	Ia
M14b	Dual message (2nd hand sent)	Ia
* M15	DEA 47	VI
M16	8BY	XIX
M17	MCW ends VA	VII
M18	4 fig pseudo time signal	
* M19	MPL	
M20	V ends == 000	
M21	????? 14 fig msgs	
M22	4XZ	
M23	Odd/Even Many Variants (all long zero)	
M24	Ends 5 long dashes (= M14)	

M25	KKN KRH KWS series	
M26	98 (see also M34)	
M27	BTV 5FG BT	VIII
M28	HEP	
M29	VDE ends AR	XIII
M29a	No preamble	XIII
M29b	Extended preamble	XIII
* M30	<deleted>	
* M31	<deleted> was FDY etc.	
M32	Numerous 4 character nets	
M33	P8K Long Zero	XIX
M34	11 12345 2fig IDs. No ending	
* M35	<deleted>	
* M36	<deleted>	
* M37	<deleted>	
* M38	<deleted>	
M39	3 fig IDs + 4 elements of 5 fig.	IXc
M40	5FG. Msg begins with AR AR SK SK	VIII?
M40a	ex M53	VIII?
* M41	WDZ	XVII
M42	FAPSI	
M43	6XM8/C37A group	
M44	Continuous Roman letters	
M45	5FG. Msgs ends with 3FG GC 000 (S21 in CW)	XIV
M46	3 fig cumulative	
M47	= NNNN AR = = = =	
* M48	Skylark/Ciocirilia Morse	XVI
* M49	AAAAA (G08A in CW)	XVII
M50	Same as M01 but inconsistent	XIV
M51	100x 5L groups + time marker	XIX
M52	2 fig: or 6 fig:	
M53	VVV CQ 747.922 ends '= = AR AR VA VA' (now M40A)	VIII?
M54	V89T (only null format known)	
M55	3F (6x) 000 000 Long zero, null format only	
M56	F:5FG. Long zero	
M57	=== === MIM ITI ITI ITI 2FG R	
M58	4FG = = 4FG = = etc R	
M59	4L1F callsigns	
M60	556Q	
M61	(CFGE6CFGE6CFGE6 etc) R	
M62	(= NVKL NVKL NVKL AR HXVH HXVH HXVH AR =) R	
M63	A2A	XVI?
M64	= 3FG 3FG = 1111 5FG AR	
M65	5FG = = QRU QRU SK SK	
M66	631 01110 for 17 mins on 6860 kHz at 2000 UTC	
M67	ends 0000, poss. Turkish (cut AUV4E6BNDT)	
M67a	M67 variant, 3F 2F 7777	
M68	Cut AUV4E6BNDT	II

M69	5FG = AR	
M70	(/year, cumulative)	
M71	K88	
M72	4FG Long zero's	II
M73	3 long tones. 5FG (cut AUV4E6BDNT)	
M74	3FG 4FG 4FG 4FG 4FG 4FG	
M75	Call: 3FG (x3) DK/GC DK/GC (R10)	
M76	ABCD de EFGH QTC xx xx = 5FG 3607X RRRRR 201XX NNN	
MX	Single letter transmissions	
* X01	Bugle	VII
X06	Six notes	Ic
X21	21-note plaintive melody (2 variants)	
XB	Buzzer (see also S28)	
XC	Crackle	
XD	Fast ICW dots (3595 kHz)	
XE	Echo/dash	
XF	Faders	
XM	Backward Music / whales	
XP	Polytone	Ib
XPB	Polytone High Pitch	Ib
XPL	Polytone Low Pitch	Ib
XQ	Plaintive mew	
XS	Saw/Whine	
XT	Pip on 3757 or 5450 kHz	
XW	Workshop	

::: KNOWN FAMILIES

Ia	Russian (KGB, GRU): E06, E17, E20, G06, G19, S06, S25, V06, M14
Ib	Russian (KGB, GRU): E07, G07, G17, S07, V07, V17?, M12, XP
Ic	Various Russian nets: M18, M21, M42, MX, S13, S14, S28, X06
II	CIA: E05, E14, E21, G05, V05, V14, M68, M72
III	E11, G10, G11, S11, S26, M03
IV	E12, G12, V12, V18, M02
V	CIA/BDN: E13, G13
VI	BND: E16, G14, G15, G16, M15
VII	'Aida': E01, S01, S02, M17, X01
VIII	'BTV/YT': S08, M27, M40, M53
IXa	Czech: G18, S10, M07, M10
IXb	Czech: S05, M06
IXc	Czech: S17, S18, S19, S29, M39
X	MI6, E03, E04
XI	E23, G02, M04
XII	E09, V08
XIII	M29, G04
XIV	Russian?: S21, S27, M01, M45, M50
XV	E18, G22, S04, M13

XVI Roumanian: V01, V17?, M48, M63?
XVII DDR: G01, G03, G08, M41, M49
XVIII Cuban: V02, M08
XIX French: M16, M33, M51

Remarks from your editor:

- * 'Ic' is not a family like the rest. It is a group of various Russian stations.
- * The Czech families (IX) probably include Slovak stations.
- * M25 is US intelligence
- * M43 is a BND/Mossad link
- * M31 <deleted> are French military stations
- * M28 is Kantonspolizei Zuerich
- * M22 is Israeli navy
- * E15 originates from Egypt
- * M59 is probably a Greek station

Numbers + Oddities Newsletter LOG COLUMN JANUARY 1999
by
Jascha Ruesseler
znn000000@hotmail.com
#####

Hi, folx, a happy new year to you all and welcome to the logs.

Our log format is as follows:

FREQ c/s Station Enigma-Code rest in free format should include time, date, mode, details and initials.

Please use the following format for the date: mmddyy, that is 121498 from now on. Please note that I can only include logs in the column which stick to this format.

This column contains logs posted to the spooks mailing list or to Ary or myself privately.

For an up-to-date reference of the enigma designators see n+o faq.

If you want to remain anonymous, just send your logs to me or Ary with a note saying so.

Let's open the logbook... Note: all January-logs are 1999, of course. Some folx got the year wrong....

Special tnx to Darren, Guy and Jon for the bunch of logs this month. Keep them coming.

CR = Cherry Ripe
LP = Lincolnshire Poacher
TCS = the Counting Station

Mossad / Isr.intel. = E10, Israeli intelligence aka
Phonetic Alphabet NATO

#####

3150 Isr. intel. (E10) 2303 (010199) USB id PCD 2 msgs
1st group 95 second group 41 (DR)
3244 M8 0400 CW UGMWA (Cont'd - Sun) 10 Jan 99 (LBJ)
3270 E10 2250 011199 MIWD023Z801500 (VM)
3280 Three Note Oddity (G4) 2135 (122798) AM 'Tune' (DR)
3292 Atencion/V2 0200 Tue 1/12/99 YL/SS rptg A 01523 84891 59951
into 5FG.(JM4)
3315 Three Note Oddity (G4) 2135 (010399) AM 3 notes (DR)
3380 Three Note Oddity (G4) 2107 (122798) AM 'Tune' then unintelligible
figures (DR)
3385 M10 We 1/13/99 2100 555x3 619x3 18 071x3 45 (GD2)
3385 M10 Mo 1/11/99 2100 555x3 619x3 18 071x3 45 (GD2)
3385 M10 We 1/6/99 2100 555x3 619x3 37 071x3 41 (GD2)
3389 V2 stn in tfc Tue 01-12-99 0112Z (BR)
3389 //6778 Atencion/V2 0100 Tue 1/19/99 YL/SS rptg A 43542 84892
59953 5FG. Unclear if this // was done deliberately like last
summer, or mixing error. (JM4)
3410 M17 We 1/13/99 2000 70269 27 = (GD2)
3410 M17 Th 1/14/99 2130 66520 32 = (GD2)
3410 M17 We 1/6/99 2000 70269 27 = (GD2)
3410 M17 Thu 1/7/99 2130 66520 32 = (GD2)
3415 Three Note Oddity (G4) 2120 (010399) AM In progress QRM off
'QNH' broadcast (DR)
3525 M45 Th 1/14/99 1802 525 796 796 43 43 = = (GD2)
3687 M51 0425 123098 CW "NR 41 D 30 05:26:00 1998" (VM)
3687 M51 0718 122398 CW "NR 02 D 23 08:18:17 1998" (VM)
3692 M51 0601 121098 CW "NR 12 D 10 06:58:12 1998" (VM)
3819 M76 Th 1/14/99 1750 Tbi9 De Os9g Qtc 35 24 = (GD2)
3819 M76 Tue 1/12/99 1750 M1rw De 42ey Qtc 31 21 = (GD2)
3819 M76 We 1/13/99 1752 Hn28 De V7i2 Qtc 33 26 = (GD2)
3819 M76 Mo 1/11/99 1750 Orgh De °pru Qtc 29 22 = (GD2)
3819 M76 We 1/6/99 1750 Sgb3 De Pm5r Qtc 19 29 = (GD2)
3819 M76 Thu 1/7/99 1750 955 De L°dk Qtc 21 22 = (GD2)
3819 M76 Frid 1/8/99 1750 dlp De Ucje Qtc 23 31 (GD2)
3819 M76 Sat 1/9/99 1750 4kjm De Su4j Qtc 25 21 = (GD2)
3819 M76 Mo 1/4/99 1751 Lta, De 1vsv Qtc 15 31 = (GD2)
3957 M51 2300 123198 CW "NR 69 J 01 00:01:48 1999" Heavy QRM (VM)
4016 M8 0200 CW UGMWN RAMUA RGDIA (Mon)(Found this sked after he
failed to show up on his normal freq of 5419. He is normally
on 4016 at 0300. I rechecked 5419 at 0205 and M8 was now up in
tfc where he eventually sent "AR(x3) RAMUA (Cont'd - then into
tfc agn). I went back to 4016, as 5419 was in tfc, to find it
silent. It appears that the M8 operator was having a bad night

and first came up on the 0300 freq instead of the 0200 freq.)
11 Jan 99 (LBJ)

4016 M8 0300 CW UGMWN RAMUA RGDIA (Mon) 11 Jan 99 (LBJ)

4017.5 ANDUWRIGMT/M8 0200 Thu 1/14/99 5L/F/G in progress. (JM4)

4024 G6 2010 120898 In progress (VM)

4025 M45 Tue 1/12/99 1802 525 796 796 43 43 = = (GD2)

4025 M45 Thu 1/7/99 1802 525 345 345 25 25 = = (GD2)

4027 M8 0300 CW DRDGN NWANA MGIRN (Sun) 17 Jan 99 (LBJ)

4027 M8 0300 CW TNTGD WGIMA WAIWA (Sun) 3 Jan 99 (LBJ)

4027.5 ANDUWRIGMT/M8 0300 Tue 1/5/99 5L/F/G in progress. (JM4)

4028 V2 1102 AM (In tfc - Mon) 11 Jan 99 (LBJ)

4028 M13 0400 010399 CW 378 = 207 19 = (VM)

4028 V2 1105 AM (In Tfc - Mon) 4 Jan 99 (LBJ)

4030 German Lady (G6) 2000 (010599) AM Sked 308 key 967 gc 112 (DR)

4032 German Lady (G6) 2007 (010499) AM In progress key 967 gc 112
00000 at around 2024 (DR)

4034 V2 0407 AM (In Tfc - Mon) 4 Jan 99 (LBJ)

4035 Atencion/V2 0400 Mon 1/11/99 YL/SS 5FG in progress. (JM4)

4036 V2 1108 AM (In Tfc - Wed) 6 Jan 99 (LBJ)

4130 phonetic alphabet E15 2104 011299 USB OM/EE OSS QRU

4173 M8 1101 CW DRDGA TNINA IRDUN (Fri) 15 Jan 99 (LBJ)

4173.5 M8 1100 CW DDMGA GGGTD TTIMD (Mon) 11 Jan 99 (LBJ)

4173.5 M8 1100 CW IRMTD WAMWD RUNTN (Fri) 8 Jan 99 (LBJ)

4173.5 M8 1100 CW IRMTA WAMWA MDRND (Wed) 6 Jan 99 (LBJ)

4174 V2 0729 010799 In progress (VM)

4174 M8 1109 CW (In tfc - Sun) 3 Jan 99 (LBJ)

4174 Atencion/V2 0300 Mon 1/4/99 YL/SS rptg A 50381 54501 49491
5FG. (JM4)

4180 M3 Sun 1/10/99 1630 287/00 (GD2)

4180 M3 Mo 1/11/99 1630 287/00 (GD2)

4180 M3 Mo 1/4/99 1630 287/00 (GD2)

4268 E10 Mossad 2211 010399 AM ongoing msg (JRU)

4270 mossad E10 2104 011199 USB YL/EE PCD 2 (JD)

4270 mossad E10 2100 011299 USB YL/EE PCD 2

4270 mossad E10 1541 010999 USB YL/EE 5 letter groups

4270 mossad E10 2138 011099 USB YL/EE 5 letter groups

4329 M8 1109 CW (In tfc - Mon) 11 Jan 99 (LBJ)

4360 Isr. intel. (E10a) 2350 (010199) USB id SYN2 just
caught the end (DR)

4365 M13 Mo 1/11/99 2000 417 = 172 26 = (GD2)

4420 M29A Mo 1/11/99 2000 Vde 78 78 12 12 11 11 1900 1900 (GD2)

4420 M29 Sun 1/3/99 2000 13x5F (GD2)

4420 M29A Mo 1/4/99 2000 51 51 13 13 4 4 1900 1900 (GD2)

4461 mossad E10 2105 011199 USB YL/EE 5 letter groups (JD)

4461 mossad E10 2205 011199 USB YL/EE FTJ (JD)

4461 E10 Mossad 2214 010399 AM ongoing msg (JRU)

4462 M12 0300 CW 637(x3) TTTTT (Cont'd - Sun) 3 Jan 99 (LBJ)

4463 mossad E10 1905 011199 USB YL/EE 5 letter groups (JD)

4463 mossad E10 1916 011299 USB YL/EE 5 letter groups
 4463 mossad E10 1914 010999 USB YL/EE 5 letter groups
 4465 German Lady (G7) 2152 (122898) AM sked 742 (DR)
 4665 E10 Mossad 1605 010399 AM ongoing msg under heavy jamming (JRU)
 4467 German Lady (G7) 2150 (010499) AM Sked 742 key 973 gc 60 (DR)
 4472 M13 Sun 1/3/99 2130 411 = 197 20 = (GD2)
 4478 M8 1103 CW (In tfc - Fri) 15 Jan 99 (LBJ)
 4479 Atencion/V2 0300 Wed 1/13/99 YL/SS rptg A 51193 86238 41461
 5FG. (JM4)
 4479 Atencion/V2? 0400 Fri 1/8/99 carrier on - no broadcast (JM4)
 4480 mossad E10 2102 011299 USB YL/EE ULX
 4485 //5027 Czech Lady 'control' (S17) 1358 (122698) USB Very weak
 unable to identify numbers (DR)
 4485 //5027 Czech Lady 'control' (S17) 1358 (122898) USB Very weak
 unable to identify numbers (DR)
 4485 //5027 Czech Lady 'control' (S17) 1355 (122998) USB Very weak
 unable to identify numbers (DR)
 4485 //5027 Czech Lady 'control' (S17) 1358 (123198) USB Very weak
 unable to identify numbers (DR)
 4488.5 M51 0726 122298 CW "NR 53 D 22 08:26:44 1998" (VM)
 4488.5 M51 0739 122998 CW "NR 31 D 29 08:40:05 1998" (VM)
 4488.5 M51 0718 122598 CW "NR 86 D 25 08:19:01 1998" (VM)
 4490 M1 Th 1/14/99 2000 197 411 411 38 38 = = (GD2)
 4490 M1 Tue 1/12/99 2000 197 810 810 38 38 = = (GD2)
 4490 M14A Mo 1/11/99 1900 263 711 90 263 898 51 (GD2)
 4490 M1 Thu 1/7/99 2000 197 433 433 48 48 = = (GD2)
 4490 M14A Mo 1/4/99 1900 263 940 82 263 945 62 (GD2)
 4506 M8 0300 CW NDNGA EDNMA RAUAN (Sun)(Every 3rd time, the first
 group was sent as RDNGA and the 2nd group was sent as IDNMA -
 This is the 1st time that I have noticed this, but then I was
 never really looking for this - Any comments on this?) 17 Jan
 99 (LBJ)
 4506 M8 0100 CW DNRW2N DDMGD DNRMD (Thurs) 14 Jan 99 (LBJ)
 4506 M8 cut no's CW DNRWN DDMGD DNRMD Thu 01-14-99 0100Z (BR)
 4507 V2 1105 AM (In tfc - Thurs) 14 Jan 99 (LBJ)
 4507 Polytone Station (XP) 2142 (010899) AM In progress (DR)
 4507 XPH 2140 010899 CW 935x3 1 03742 00211 (VM)
 4507 V2 1104 AM (In tfc - Sat) 9 Jan 99 (LBJ)
 4507 M8 0300 CW DRWAN GDNWN MGTAN (Sun) 3 Jan 99 (LBJ)
 4507 Polytone Station (XP) 2142 (010899) AM In progress (DR)
 4543 Two Letter (G16) 2236 (122898) USB In progress (DR)
 4546 Russian Man (S7) 2211 (122198) AM sked 147 (DR)
 4546 Russian Man (S7) 2210 (122898) AM sked 147 key 546 gc 36 (DR)
 4558 English Man (E7) 2141 (122898) AM sked 915 key 609 gc 64 (DR)
 4558 English Man (E7) 2140 (123098) AM sked 915 key 609 gc 64 (DR)
 4559 English Man (E7) 2141 (122398) AM sked 915 key 608 gc 46 (DR)
 4560 Isr. intel. (E10) 2103 (122098) USB id YHF group 49 (DR)
 4560 mossad E10 2107 011199 USB YL/EE 5 letter groups (JD)

4560 mossad E10 1915 011299 USB YL/EE 5 letter groups
4560 mossad E10 1915 010999 USB YL/EE 5 letter groups
4574 M13 Thu 1/7/99 2100 253 = 175 24 = (GD2)
4580 M29A Mo 1/11/99 1800 Vde 78 78 12 12 11 11 1900 1900 (GD2)
4580 M29A Mo 1/4/99 1800 51 51 13 13 4 4 1900 1900 (GD2)
4594 Two Letter (G16) 0131 (122698) USB id Golf Kilo msg for 571
gc 87 (DR)
4594 Two Letter (G16) 0132 (122998) USB id Golf Kilo msg for 571
gc 87 (DR)
4594 Two Letter (G16) 2100 (123098) USB id Golf Kilo msg for 571
gc 87 (DR)
4605 M14A Frid 1/8/99 1900 560 283 71 560 (GD2)
4606 Russian Man (S6) 2106 (122598) AM In progress key 345 gc 62
00000 at 2115 (DR)
4613 M1B Mo 1/11/99 2110 136 168 168 47 47 = = (GD2)
4613 M1B Mo 1/4/99 2110 136 347 347 46 46 = = (GD2)
4616 Russian Man (S6) 0410 (010899) AM In progress key 736 gc 40
00000 at 0412 (DR)
4616 Russian Man (S6) 0410 (010899) AM In progress key 736 gc 40
00000 at 0412 (DR)
4625 THE BUZZER (S28) 1555Z (11.12.98) USB in idle mode (SD)
4627 German Lady (G7) 1923 (121898) AM sked 164 key 3241 gc 127 QRM
off buzzer (DR)
4630 English Man (E6) 2106 (122398) AM key 932 gc 54 00000 at 2114
QRM off data mode and buzzer (DR)
4637.5 M31 0218 CW VVV DE FDG AR (Sun) 10 Jan 99 (LBJ)
4640 // 5046 TCS E5 freqs - carriers only went off at 0205Z possibly
was xmsn at 0100????? (BR)
4665 Isr. intel. (E10a) 1743 (010699) USB id MIW2 cont.
still going at 1900 (DR)
4665 Isr. intel. (E10a) 1904 (010799) USB id MIW2 cont.
still going at 2135, Had Changed to msg String: MIW100 by
2231, had gone at 2332 E10stringone.wav (DR)
4665 Isr. intel. (E10a) 0420 (010899) USB id MIW2 (DR)
4665 //5230 Isr. intel. (E10a) 1906 (010899) USB msg
String: MIWDRC8C7 for hours and hours E10stringtwo.wav (DR)
4665 mossad E10 2107 011199 USB YL/EE MIW D023Z801500 ended at 2109z
(JD)
4665 mossad E10 2120 011199 USB YL/EE MIW D023Z801500 //5230 (JD)
4665 mossad E10 2120 011299 USB YL/EE MIW DQCZ801200 //5230
4665 mossad E10 2107 011199 USB YL/EE MIW D023Z80 msg ended at
21:10z (JD2)
4665 Isr. intel. (E10a) 1904 (010799) USB id MIW2 cont.,
still going at 2135, Had Changed to msg String: MIW100 by
2231, had gone at 2332 (DR)
4665 Isr. intel. (E10a) 0420 (010899) USB id MIW2 (DR)
4665 //5230 Isr. intel. (E10a) 1906 (010899) USB msg
String: MIWDRC8C7 for hours and hours E10stringtwo.wav (DR)

4722 M3 Mo 1/11/99 1200 016/00 (GD2)
 4722 M3 Mo 1/4/99 1200 018/54 (GD2)
 4870 M3 Fri 1/15/99 0800 041/00 (GD2)
 4870 M3 0800 122598 CW 041/00 (VM)
 4870 M3 Frid 1/8/99 0800 041/00 (GD2)
 4880 Mossad E10 2103 011199 USB YL/EE ULX (JD)
 4880 mossad E10 2136 011299 USB YL/EE 5 letter groups
 4880 mossad E10 1615 010999 USB YL/EE 5 letter groups
 4880 mossad E10 1910 010999 USB YL/EE 5 letter groups
 4880 E10 Mossad 2134 010399 AM ongoing msg (JRU)
 4880 ULX E10 Mossad 2100 010499 AM ULX, msg, groups 66 (JRU)
 4949 M1B We 1/13/99 1818 103 905 905 41 41 = = (GD2)
 4949 M1B Mo 1/11/99 1818 103 905 905 41 41 = = (GD2)
 4949 M1B We 1/6/99 1818 103 523 523 45 45 = = (GD2)
 4950 M1B Mo 1/4/99 1818 103 523 523 45 45 = = (GD2)
 4958 M10 Sun 1/10/99 1630 555x3 571x3 49 275x3 22 (GD2)
 4958 M10 Mo 1/11/99 1630 555x3 571x3 49 275x3 22 (GD2)
 4958 M10 Sat 1/9/99 1630 Missed 049 34 435 14 (GD2)
 4985 M24A We 1/6/99 1900 362 581 96 362 915 46 (GD2)
 4990 M1B Th 1/14/99 2132 514 246 246 91 91 = = (GD2)
 4990 M1B Thu 1/7/99 2132 514 168 168 47 47 = = (GD2)
 5018 M51 0743 011399 CW "NR 19 J 13 08:44:40 1999" // 3692(VM)
 5020 M10E Th 1/14/99 1000 111x3 76583 20 46160 19 (GD2)
 5027 M10 0219 CW (In 5 fig - QSZ - T=0 - Sat) BT(x2) 75(x2) 41(x2)
 450(X3) 50(x2) 41(x2) bt(x2) 70148 ... BT(x2) 50(x2) 41(x2)
 TTT 9 Jan 99(LBJ)
 5046 TCS/E5 0005 USB 610(x3) 1234567890 (Fem/EE - Thurs) 14 Jan 99 (LBJ)
 5050 M3 Tue 1/12/99 0815 211/00 (GD2)
 5050 M3 Tue 1/5/98 0815 211/00 (GD2)
 5062 M13 Mo 1/4/99 2000 261 = 206 19 = (GD2)
 5062 M13 Mo 1/4/99 2100 261 = 206 19 = (GD2)
 5080 German Lady (G7) 2131 (010499) AM Sked 742 key 973 gc 60 (DR)
 5080 german lady G7 2123 011199 AM YL/GG 762 000 (JD)
 5080 English Man (E6) 1605 (122298) AM In progress key 846 gc 109
 00000 at 1623 (DR)
 5080 English Man (E6) 1600 (122398) AM id 105 key 846 gc 109 repeat
 of 22/12 (DR)
 5080 German Lady (G7) 2136 (122898) AM sked 742(probable never heard
 id) in progress (DR)
 5088 M3 We 1/13/99 1200 016/00 (GD2)
 5091 mossad E10 1714 011099 USB YL/EE 5 letter groups
 5091 mossad E10 2014 011099 USB YL/EE 5 letter groups
 5106 M8 cut no's CW UDRAA AWGNA DWDRA Thu 01-14-99 0400Z (BR)
 5107 English Man (E7) 2121 (122398) AM sked 915 key 608 gc 46 (DR)
 5107 English Man (E7) 2120 (123098) AM sked 915 key 609 gc 64 (DR)
 5108 English Man (E7) 2124 (122898) AM sked 915 key 609 gc 64 (DR)
 5116 M8 cut no's CW stn in tfc Fri 01-15-99 0205Z (BR)
 5123.5 M51 0720 120998 CW "NR 75 D 09 08:16:49 1998" (VM)

5127 M51 0646 122398 CW "NR 87 D 23 07:46:51 1998" (VM)
5127 M51 1820 122998 CW "NR 34 D 29 19:20:54 1998" (VM)
5127 M51 0701 123098 CW "NR 66 D 30 08:01:56 1998" (VM)
5130 M51 0401 010599 CW "NR 58 J 05 05:01:51 1999" (VM)
5130 M51 2142 010799 CW "NR 31 J 07 22:43:31 1999" (VM)
5131 M12 2252 122298 CW In progress (VM)
5166 English Man (E7) 2110 (010499) AM sked 916 null msg format (DR)
5170 Isr. intel. (E10a) 1923 (010899) USB id VLB2 cont.,
had stopped by 2000 (DR)
5170 mossad E10 1451 011299 USB YL/EE VLB 2 //4165
5170 mossad E10 1910 011299 USB YL/EE VLB 2
5170 mossad E10 1916 010999 USB YL/EE VLB 2
5170 Isr. intel. (E10a) 1923 (010899) USB id VLB2 cont,
had stopped by 2000 (DR)
5180 M3 Mo 1/11/99 0830 044/00 Same as 1998 (GD2)
5180 M3 Mo 1/4/99 0830 043/50 (GD2)
5180 M3 Mo 1/4/99 0930 015/58 (GD2)
5230 MOSSAD (E10) 1514Z (11.12.98) USB id KPA2 (SD)
5230 mossad E10 1916 010999 USB YL/EE MIW 2
5230 mossad E10 1810 011099 USB YL/EE MIW M213Z2 then to MIW2 at 1815z
5230 mossad E10 2015 011099 USB YL/EE 5 letter groups
5230 Isr. intel. (E10a) 1901 (122898) USB id MIW2 (DR)
5236 M12 0630 123098 CW 691x3 1 4568 145 (VM)
5250 Polytone Station (XP) 2111 (122298) AM Intro tones until 2115
then tiny (null ?) msg (DR)
5274 M13 Tue 1/12/99 2100 735 735 735 000 = 179 21 = (GD2)
5276 M13A Mo 1/11/99 2100 735x1 715x2 = 179 22 = (GD2)
5277 Russian Man (S7) 2140 (010499) AM sked 847 null msg format (DR)
5279 M51 2024 120898 CW "NR 60 D 08 21:21:26 1998" (VM)
5279 M51 1751 120998 CW "NR 75 D 09 18:48:40 1998" (VM)
5279 M51 0440 121098 CW "NR 89 D 10 05:37:23 1998" (VM)
5279 M51 2344 122198 CW "NR 68 D 22 00:44:55 1998" (VM)
5279 M51 1739 123098 CW "NR 65 D 30 18:39:21 1998" (VM)
5301 E5 0500 123098 ID 821 // 7473 (VM)
5301 E5 0535 010299 In progress (VM)
5320 M1 Th 1/14/99 1800 197 274 274 36 36 = = (GD2)
5320 M1 Tue 1/12/99 1800 197 213 213 35 35 = = (GD2)
5320 M1 Thu 1/7/99 1800 197 180 180 39 39 = = (GD2)
5322 Russian Man (S7) 2154 (122198) AM sked 147 key 3848(possibly)
gc 4X(missed last digit) (DR)
5322 Russian Man (S7) 2150 (122898) AM sked 147 key 546 gc 36 000 000
at 2159 (DR)
5340 Swedish Rhapsody (E23) 1258 (010499) USB Headers: 38977 19409
87149 (DR)
5340 Swedish Rhapsody (E23) 1259 (010699) USB In progress (DR)
5360 M3 We 1/13/99 0830 044/00 (GD2)
5364 Russian Man (S7) 2133 (122198) AM sked 168 null msg format (DR)
5364 Russian Man (S7) 2130 (122898) AM sked 168 null msg format (DR)

5365 M13 Sun 1/10/99 2000 417 = 172 26 = (GD2)
5367 German Lady (G7) 2110 (011199) AM sked 742 null msg format (DR)
5376 German Lady (G7) 2118 (010499) AM In progress, 'ENDE' at 2123 (DR)
5376 german lady G7 2110 011199 USB YL/GG Achtung 762 ?? 000 ende (JD)
5376 German Lady (G7) 2110 (122898) AM sked 742 key 973 gc 60 (DR)
5377 M12 0502 123098 CW 367x3 1 (VM)
5407 TCS/E5 1411 USB (In tfc - Sun - Probably //of 7836 sked) 17 Jan 99 (LBJ)
5417 V2 0722 011199 In progress (VM)
5418 M76? 0214 CW (In 5ltr code - bar ltrs - Sun) BT .39 K 9 Jan 99(LBJ)
5419 M8 cut no's CW DRDGD MTRIA IDNMN Mon 01-18-99 0200Z (BR)
5419 M8 0205 CW (In tfc) AR(x3) RAMUA (Cont'd - into tfc agn - Mon) 11 Jan 99 (LBJ)
5419 M8 0203 CW IRTMN (Sat) BT(x3) NMWNG NUUTI ..9 Jan 99 (LBJ)
5422 //6458//8464 LP (E3) 1903 (121998) USB id 79856 (DR)
5422 //8464//6485 LP (E3) 1707 (123198) USB id 79856 no jamming (DR)
5428 M51 0731 011299 CW "NR 66 J 12 08:33:00 1999" (VM)
5430 Russian Man (S6) 2216 (122898) AM sked 735 Null msg format noll sounds like 'boiled' QRM off morse (sister ??) station (DR)
5432 M51 0719 010799 CW "NR 81 J 07 08:20:11 1999" // 3640 (VM)
5435 MOSSAD/E10 0300 Wed 1/13/99 YL/EE rptg ART 5LG. (JM4)
5435 mossad E10 1451 011299 USB YL/EE 5 letter groups
5435 MOSSAD/E10 0300 Sun 1/10/99 YL/EE rptg ART 5LG. (JM4)
5435 mossad E10 2013 011099 USB YL/EE 5 letter groups
5435 Isr. intel. (E10) 2003 (122498) USB id ART gr 25 (DR)
5435 MOSSAD/E10 0300 Tue 1/5/99 YL/EE rptg ART 5LG. (JM4)
5448 XX 0738 011399 Southern Russian (Krasnodar/Volgograd - -?) area channel marker - "The Pip" - repeated 3 times the following USB live male voice msg in Russian: "Dlia (For) 014, 071, 206, 500, 634, 850. Kak slyshno? Priyom." (How can you read me? Reception). Sounded in the military style. At 07:39 back to pips. No answer heard on this frequency. (RP)
5460 Russian Man (S6) 0502 (010899) AM id 731 null msg format (DR)
5460 Russian Man (S6) 0502 (010899) AM id 731 null msg format (DR)
5470 M10 Sun 1/10/99 1810 555x3 661x3 49 (GD2)
5503 M3 Tue 1/12/99 0800 743/00 MCW (GD2)
5503 M13 2222 122798 CW In progress 501 = 173 22 = (VM)
5503 M3 Tue 1/5/98 0800 743/00 MCW (GD2)
5520 M3 Tue 1/12/99 0830 018/51 (GD2)
5520 M3 Th 1/14/99 0900 011/00 (GD2)
5520 M3 Th 1/14/99 0830 018/51 (GD2)
5520 M29A Mo 1/11/99 0800 33 33 35 35 11 11 0900 0900 (GD2)
5520 M29A Mo 1/11/99 1400 33 33 35 35 11 11 0900 0900 (GD2)
5520 M3 Thu 1/7/99 0830 015/54 (GD2)
5520 M3 Thu 1/7/99 0900 015/58 (GD2)

5520 M29A Mo 1/4/99 0800 45 45 36 36 4 4 0900 0900 (GD2)
5520 M29A Mo 1/4/99 1400 Repeat of 0800 Mo 1/4/99 (GD2)
5520 M3 Tue 1/5/98 0830 015/54 (GD2)
5520 M29A Tue 1/5/98 0800 45 45 36 36 4 4 0900 0900 (GD2)
5530 MOSSAD (E10) 1516Z (11.12.98) USB too faint to id (SD)
5530 Phonetic Alphabet-pre-NATO (E15) 2000 (122098) USB Unintel-
ligible (DR)
5610 M3 Tue 1/12/99 1000 743/00 MCW (GD2)
5610 M3 Tue 1/5/98 1000 743/00 MCW (GD2)
5620 M29A Mo 1/11/99 0830 33 33 35 35 11 11 0900 0900 (GD2)
5620 M29A Mo 1/11/99 1430 33 33 35 35 11 11 0900 0900 (GD2)
5620 M29A Mo 1/4/99 0830 45 45 36 36 4 4 0900 0900 (GD2)
5620 M29A Mo 1/4/99 1430 Repeat of 0830 Mo 1/4/99 (GD2)
5629 Isr. intel. (E10a) 1724 (010699) USB id KPA2 cont.,
stopped at about 1820 (DR) 1734 (010799) USB id KPA2 cont.(DR)
0417 (010899) USB id KPA2 cont.(DR) 1918 010999 USB YL/EE
KPA22R58B23S1446. 1817 011099 USB YL/EE KPA 2. 1724 (010699)
USB id KPA2 cont, stopped at about 1820 (DR). 1734 (010799)
USB id KPA2 cont.(DR). 0417 (010899) USB id KPA2 cont. (DR)
2019 (122798) USB id KPA2 (DR)
5670 M3 0730 011399 CW 508/00 (VM)
5736 German Lady (G7) 2110 saying 742 000 This sounds like a little
girl, no doubt about it. Amazing hi-fi quality though and
sounded very near. Carrier on for some time before b'cast. (JJ)
5743 Russian Man (S7) 2130 (010499) AM sked 847 null msg format (DR)
5746 //6959//10426 LP (E3) 2105 (122098) USB id
39164 (DR). //6959//9251 LP (E3) 2206
(122598) USB id 18172 (DR). //6959 LP (E3)
2101 (123198) USB id 18172 (DR)
5748 M4 We 1/13/99 1357 Lo Lox3/60783 (GD2)
5753 English Man (E6) 2105 (010899) AM In progress key 179 gc 65 (DR)
5753 russian man S6 2144 011299 USB OM/RR 571 000
5753 English Man (E6) 2105 (010899) AM In progress key 179 gc 65 (DR)
5770 Two-Letter German/G16 0400 Sun 1/10/99 YL/GG rptg Whiskey Lima
w/41 3/2FGx2 msg for 522. (JM4)
5803 M1B Thu 1/7/99 1823 708 448 448 47 47 = = (GD2)
5810 M1 Sat 1/9/99 1500 197 774 774 35 35 = = (GD2)
5820 mossad E10 1904 011199 USB YL/EE YHF (JD)
5820 mossad E10 1912 011299 USB YL/EE 5 letter groups
5820 mossad E10 1919 010999 USB YL/EE 5 letter groups
5820 mossad E10 2009 011099 USB YL/EE 5 letter groups
5820 Isr. intel. (E10a) 1532 (122398) USB id YHF2 (DR)
5820 Isr. intel. (E10) 1602 (123198) USB id YHF (DR)
5820 YHF E10 Mossad 1532 010399 AM YHF, msg. (JRU)
5820 YHF2 E10 Mossad 1631 010399 AM YHF2-bc (JRU)
5870 M3 Th 1/14/99 0800 017/00 (GD2)
5870 M3 Thu 1/7/99 0800 016/50 (GD2)
5907 Polytone Station (XP) 2100 (010899) AM Intro tones then msg (DR)

5907 M51 0718 011199 CW "NR 26 J 11 08:19:47 1999" (VM)
5907 Polytone Station (XP) 2100 (010899) AM Intro tones then msg (DR)
5911 M51 0715 010599 CW "NR 89 J 05 08:15:25 1999" (VM)
5922 M51 0746 123198 CW "NR 21 D 31 07:47:01 1998" // 6862.5(VM)
5946 M10 Th 1/14/99 18?? IP Ended 19 19 37 37 000 (GD2)
5946 M10 Sun 1/10/99 1920 555x3 968x3 33 652x3 26 (GD2)
5946 M10 Sun 1/3/99 1920 555x3 968x3 35 417x3 16 (GD2)
5946 M10 Mo 1/4/99 1920 555x3 968x3 25 417x3 16 (GD2)
6200 swedish rhapsody E23 0958 011899 USB YL/EE 5 fig groups (JD)
6270 Isr. intel. (E10) 1602 (010199) USB id ULX (DR)
6270 //7760 MOSSAD/E10 0100 Tue 1/19/99 YL/EE rptg ULX 5LG. (JM4)
6270 //7760 MOSSAD/E10 0100 Tue 1/12/99 YL/EE rptg ULX 5LG. (JM4)
6270 mossad E10 1917 011299 USB YL/EE 5 letter groups
6270 mossad E10 1913 010999 USB YL/EE 5 letter groups
6270 //7760 MOSSAD/E10 0100 Fri 1/8/99 YL/EE rptg ULX 5LG. (JM4)
6330 M3 Tue 1/12/99 1200 741/00 (GD2)
6330 M3 Mo 1/11/99 0900 976/00 Same as 1998 (GD2)
6330 M3 Frid 1/8/99 0830 016/50 (GD2)
6330 M3 Mo 1/4/99 0900 976/00 (GD2)
6378 M13 Sun 1/3/99 2000 261 = 206 19 = (GD2)
6430 M3 Thu 1/7/99 1030 216/00 (GD2)
6485 //7755//10426 LP (E3) 1608 (123098) USB id 79856 no jamming (DR)
6498 MOSSAD (E10) 1541Z (11.12.98) USB in progress w/ grp 92 (SD)
6498 mossad E10 1715 011099 USB YL/EE 5 letter groups
6507 swedish rhapsody E23 1002 010499 USB YL/EE 5 fig groups -
sounded like E5 stn voice
6574 M13 Frid 1/8/99 2100 253 = 175 24 = (GD2)
6620 S6 0610 011199 967x3 00000 (VM)
6645 Eastern Music Station (V8) 1900 (010299) AM Short burst of
arabic type music then arabic? numbers, very strong carrier but
poor modulation; more music then sound of a tape being wound
quickly ! followed by carrier off at 1909 V8one.wav (DR)
6715 Phonetic Alphabet-pre-NATO (E15) 1631 (010199) USB Nancy Adam
Susan calling Queen Robert Union null msg format (DR)
6745 Isr. intel. (E10a) 1627 (010699) USB id MIW2 cont.,
stopped with 'MIKE' at 1721 (DR). 1520 (010799) USB id MIW2
cont. (DR). 1615 010999 USB YL/EE MIW 2 //4665. 1627 (010699)
USB id MIW2 cont., stopped with 'MIKE' at 1721 (DR) 1743
(010699) USB id MIW2 cont. still going at 1900 (DR). 1520
(010799) USB id MIW2 cont.(DR)
6766.5 ANDUWRIGMT/M8 0100 Tue 1/5/99 5L/F/G in progress. (JM4)
6767 M8 We 1/13/99 0800 15803 06322 34232 (GD2)
6767 M8 cut no's CW stn in tfc Tue 01-12-99 0111Z (BR)
6767 M8 Mo 1/11/99 0800 15801 91813 30383 (GD2)
6767 M12 2206 122998 CW In progress (VM)
6767.5 ANDUWRIGMT/M8 0100 Tue 1/12/99 missed partial call-up; first
group TMGND then into 5L/F/G. (JM4)
6768 Atencion/V2 0400 Mon 1/11/99 YL/SS rptg A 15283 65851 15151

5FG. (JM4). 0405 AM (In Tfc - Mon) 4 Jan 99 (LBJ)
 6769 M8 0808 122398 CW In progress (VM)
 6780 TCS (E5) 2008 (010799) USB id 998 count 68 (DR)
 6780 S6 1706 122698 In progress (VM)
 6780 TCS/E5 2212 USB (In tfc - Fem/EE - Sun) 3 Jan 99 (LBJ)
 6780 TCS (E5) 2008 (010799) USB id 998 count 68 (DR)
 6780 TCS (E5) 2007 (122498) USB id 998 count 68 (DR)
 6780 TCS (E5) 2200 (122798) USB id 194 count inaudible
 extremely weak (DR)
 6780 TCS (E5) 2000 (123198) USB id 998 (DR)
 6780 E5 TCS 2000 010499 USB 123... count, ID: 998 (JRU)
 6781 M12 0633 122298 CW In progress (VM)
 6782 M12 We 1/13/99 1700 749x3 1 5490 142 (GD2)
 6782 M12 Th 1/14/99 1700 749x3 000 (GD2)
 6782 M12 Mo 1/11/99 1700 749x3 1 6417 143 (GD2)
 6782 M12 Sun 1/10/99 1700 749x3 000 (GD2)
 6782 M12 0742 121098 CW In progress (VM)
 6782 M12 1700 122698 CW 749x3 000 (VM)
 6782 M12 0739 123198 CW In progress (VM)
 6782 M12 0400 010599 CW 749x3 1 3933 140 (VM)
 6782 M12 0711 011299 CW In progress (VM)
 6782 M12 We 1/6/99 1700 749x3 1 2691 143 (GD2)
 6782 M12 Thu 1/7/99 1700 749x3 000 (GD2)
 6782 M12 Frid 1/8/99 1700 749x3 000 (GD2)
 6782 M12 Sat 1/9/99 1700 749x3 000 (GD2)
 6782 M12 0400 CW 749(x3) 1 (Cont'd - Sun) 10 Jan 99 (LBJ)
 6782 Atencion/V2 0300 Fri 1/8/99 YL/SS rptg A 91809 10492
 15282 5FG. (JM4)
 6782 M12 Mo 1/4/99 1700 749x3 1 8276 140 (GD2)
 6782 M7 Mo 1/4/99 1700 Ltrs A 475? 24 48 (GD2)
 6785 M8 1300 CW GUDID IAARN NRIDN (Was testing on freq at 1254z, but
 6785 M8 1318 CW (In tfc - Sun) 10 Jan 99 (LBJ)
 6786 V2 0631 010699 In progress (VM)
 6786 M8 1100 CW WUUUN MNAAN DNWIA (Sat) 9 Jan 99 (LBJ)
 6787 V2 1014 AM (In tfc - Sat) 16 Jan 99 (LBJ)
 6787 M8 Th 1/14/99 0800 98683 00053 66061 (GD2)
 6787 M8 Tue 1/12/99 1000 91673 56702 69103 (GD2)
 6787 M8 Sat 1/9/99 1100 51442 92112 32571 (GD2)
 6787 M8 Sun 1/3/99 0900 24553 61681 97701 (GD2)
 6787 M8 Tue 1/5/98 1000 76282 29011 45422 (GD2)
 6793 M12 2110 120898 CW 765x3 2 349 173 824 120 (VM)
 6795 V2 0609 011199 In progress (VM)
 6796 M8 cut no's CW RGDIN RTMDD RMDMN Mon 01-11-99 1300Z (BR)
 6796 M8 cut no's CW stn in tfc Fri 01-15-99 1315Z (BR)
 6797 V2 Atencion stn Mon 01-18-99 0200Z (BR)
 6797 V2 0204 AM (In tfc - Mon) 11 Jan 99 (LBJ)
 6797 M8 1200 CW TIUNA MRGUD UDGDN (Wed) 13 Jan 99 (LBJ)
 6797 M8 0710 010899 CW In progress (VM)

6797 M8 1200 CW TTGAN WTWMA RRRTD (Fri) 8 Jan 99 (LBJ)
6797 Atencion/V2 0200 Mon 1/4/99 YL/SS rptg A 28333 55023 55441
5FG. (JM4)
6797 M8 Sun 1/3/99 0800 04052 89501 51452 (GD2)
6809 M3 Th 1/14/99 1000 976/00 (GD2)
6809 M3 Thu 1/7/99 1000 Call missed (GD2)
6825 M8 We 1/13/99 0800 58682 00052 96343 (GD2)
6825 M8 1154 CW UDRAA(x2) (Long Pause) AWGNA (x2)(Long Pause)IDMIN
(Long Pause) AWGNA IDMIN UDRAA (Cont'd - Wed)(He is early for
the 1200 sked - appears to be having some xmitter problems and
testing. I am also monitoring 6797 and 6854 where regular skeds
are supposed to take place at 1200. When the 6854 sked does
come up late at 1202, this freq became silent. It appears that
the M8 operator was doing some testing on an adjacent freq also
used by M8 to do some testing prior to his scheduled sked.)
13 Jan 99 (LBJ)
6825 M8 Tue 1/12/99 1000 84061 29433 30892 (GD2)
6825 M8 Thu 1/7/99 1000 98861 21421 23331 (GD2)
6825 M8 Tue 1/5/98 0800 42801 61683 97703 (GD2)
6825 M8 Tue 1/5/98 1000 24853 90383 20541 (GD2)
6826 M8 1007 CW (In tfc - Sat) 16 Jan 99 (LBJ)
6826 Atencion/V2 0300 Wed 1/13/99 YL/SS rptg A 91809 89461
96151 5FG. (JM4)
6826 Atencion/V2 0300 Mon 1/4/99 YL/SS rptg A 28333 55023 55441
5FG. (JM4)
6827 V2 0300 AM 10493 1841 77442 (Note that 2nd group only has 4
figs! - Mon) 11 Jan 99 (LBJ)
6840 mossad E10 1604 011199 USB YL/EE EZI //9130 (JD)
6840 mossad E10 1904 011199 USB YL/EE EZI (JD)
6840 mossad E10 1913 011299 USB YL/EE 5 letter groups
6840 Isr. intel. (E10) 1932 (121998) USB id EZI group 64 (DR)
6840 Isr. intel. (E10) 2000 (121998) USB id EZI group 26 (DR)
6840 Isr. intel. (E10) 2003 (122298) USB id EZI group 32 (DR)
6840 EZI2 E10 Mossad 1630 010399 AM EZI 2- bc // 9130 (JRU)
6840 EZI E10 Mossad 1932 010499 AM EZI, msg, groups 67, starts EJBNQ
THWVN... (JRU) also found an ongoing msg at 1732.
6845 Russian Man (S6) 1639 (010699) AM In progress with 5FG, short
silence then started repeating 482 then more 5FG, ended with a
group count of 68 and 00000 at 1649 (DR)
6853 Two Letter (G16) 1904 (122998) USB id Whiskey Lima msg for 026
gc 84 (DR)
6854 M8 Th 1/14/99 0800 25931 06323 34233 (GD2)
6854 M8 cut no's CW TWGRA MRWUA MRTNA Thu 01-14-99 0400Z (BR)
6854 M8 cut no's CW stn in tfc Thu 01-14-99 1315Z (BR)
6854 M8 1202 CW RAA AWGNA IDMIN UDRAA (Cont-d except for first 3 ltrs
- Wed - Was testing prior to sked on 6825) 13 Jan 99 (LBJ)
6854 M8 Sat 1/9/99 0900 39322 91811 30381 (GD2)
6855 Atencion/V2 0300 Mon 1/4/99 YL/SS rptg A 15281 44893 55323 5FG.

(JM4)

6862.5 M51 0710 120798 CW "NR 85 D 07 08:07:17 1998" (VM)

6862.5 M51 0741 121098 CW "NR 28 D 10 08:38:14 1998" (VM)

6862.5 M51 0726 122198 CW "NR 14 D 21 08:26:07 1998" (VM)

6862.5 M51 0816 122498 CW "NR 52 D 24 09:16:36 1998" (VM)

6866 M8 cut no's CW TMGND WRITA RGDIN Tue 01-12-99 0200Z (BR)

6866 M8 1320 CW (In tfc - Sat) 9 Jan 99 (LBJ)

6866 M8 0212 CW (In Tfc - Tue) 5 Jan 99 (LBJ)

6870 M12 Th 1/14/99 1900 183x3 1 548 285 (GD2)

6876 M12 0532 121098 CW In progress (VM)

6876 M12 0704 010499 CW In progress (VM)

6876 M12 0532 011199 CW In progress (VM)

6878 M12 0533 122298 CW In progress (VM)

6891 TCS (E5) 2002 (010199) USB id 686? very weak (DR)

6891 TCS (E5) 1903 (010299) USB id 613 count 44 (DR)

6891 TCS (E5) 2001 (010399) USB id 686 count 154 (DR)

6891 TCS (E5) 1907 (010699) USB id 613 count 44 (DR)

6891 TCS (E5) 2002 (010899) USB id 686 count 154 (DR)

6891 TCS (E5) 1904 (010999) USB id 901 count 80 (DR)

6891 TCS E5 1909 010999 USB YL/EE id 901 ?? count 60 ?? very weak signal

6891 TCS E5 2004 011099 USB YL/EE id 686 count 154

6891 TCS (E5) 1904 (122698) USB id 949 count 167 unable to find parallel freq (DR)

6891 TCS (E5) 2000 (122798) USB id 686 count 154 unable to find parallel freq (DR)

6893 V2 stn in tfc Fri 01-15-99 0205Z (BR)

6900 //10426//11545 LP (E3) 2005 (121998) USB id 71946 10426 'breaking'(DR)

6920 M8 Mo 1/11/99 0800 95992 45291 30383 (GD2)

6920 M8 Mo 1/4/99 0800 04093 89502 50453 (GD2)

6928 Spanish Man (V8) 2004 (010499) AM sked 394 null msg format (DR)

6931 M51 2217 122198 CW "NR 54 D 21 23:17:27 1998" (VM)

6932 M8 cut no's CW stn in tfc Tue 01-12-99 1305Z (BR)

6932 M12 0720 122398 CW 963x3 1 (VM)

6932 M8 1320 CW (In tfc - Sat) 9 Jan 99 (LBJ)

6933 V2 1011 AM (In tfc - Sat) 16 Jan 99 (LBJ)

6933 M8 Fri 1/15/99 0800 93491 84371 66062 (GD2)

6933 M8 Tue 1/12/99 0800 58681 00051 96342 (GD2)

6933 M8 Tue 1/5/98 0800 14481 89503 20331 (GD2)

6934 M8 Sat 1/9/99 0800 46353 45251 79562 (GD2)

6935 M12 We 1/13/99 2100 658x3 1 5490 142 (GD2)

6935 M13 Th 1/14/99 1600 915 = 172 21 = (GD2)

6935 M13 Th 1/14/99 1800 915 = 172 21 = (GD2)

6935 M12 We 1/6/99 2100 658x3 1 2691 143 (GD2)

6947 E7 1833 122998 697x3 000 (VM)

6959 //9251 LP (E3) 1909 (010399) USB id 99970 jammer on 6959 (DR)

6959 LP E3 2002 011199 USB YL/EE id 99970 //9251

6959 LP E3 2102 011199 USB YL/EE id 87168 //9251 (JD)
6959 LP E3 2206 011199 USB YL/EE id 20940 //10426 (JD)
6959 LP E3 1905 011299 USB YL/EE 99970
6959 LP E3 2007 010899 USB YL/EE id 99970 //9251
6959 LP E3 2102 010899 USB YL/EE id 54654 //9251
6959 LP E3 2005 011099 USB YL/EE id 87168 //9251
6959 //9251//11545 LP (E3) 1906 (122798) USB id 97324 (DR)
6959 LP (E3) 1608 (123098) USB id 29388 nothing heard on 9251 or
11545 (DR)
6959 LP (E3) 1905 (123198) USB id 29388 (DR)
6959 LP (E3) 2007 (123198) USB id 19870 (DR)
6959 LP E3 2102 122598 USB YL/EE id 19870 //9251//11545
6959 E3 LP 2001 010499 USB tune, ID: 99970, // 9251 (JRU)
6959 E3 LP 2101 010499 USB ID: 49871 // 11545 (JRU)
6959 LP E3 2107 010499 USB YL/EE id 49871 //11545
6960 //8152 TCS (E5) 2200 (010499) USB id 595, QRM off the Poacher
on 6959 (DR)
6960 //8152 TCS (E5) 2202 (010699) USB id 595 count 164 (DR)
6960 //8152 TCS (E5) 2205 (122898) USB id 595 count 164 QRM
off LP on 6959 !!! don't they talk to each other ?!?!? (DR)
6960 TCS (E5) 2206 (123098) USB id 595 count 167? very weak (DR)
6970 //9070 TCS (E5) 1802 (010299) USB id 261 (DR)
6970 TCS (E5) 1802 (010499) USB id 261 (DR)
6970 //9070 TCS (E5) 1805 (010999) USB id 261 count 91 (DR)
6970 TCS E5 1809 011199 USB YL/EE id 261 count 91 (JD)
6970 //9070 TCS (E5) 1802 (122698) USB id 641 count 136 (DR)
6982 M8 1300 CW IDNMN NWIGD RDNGN (Was testing on freq at 1253z,
but came up on sked at 1300 - Sun) 17 Jan 99 (LBJ)
6982 M8 cut no's CW stn in tfc Mon 01-11-99 1220Z (BR)
6982 M8 1316 CW (In tfc - Sun) 10 Jan 99 (LBJ)
6983 SPANISH LADY (V2) 1110Z (07.01.99) AM in progress (SD)
6983 Atencion/V2 0200 Fri 1/8/99 YL/SS rptg A 91809 10492 15282 5FG
(JM4)
7250 Swedish Rhapsody (E23) 1157 (122898) AM Headers 70951 21697
29184 QRM off broadcast station (DR)
7250 Swedish Rhapsody (E23) 1208 (123098) AM In progress QRM off
broadcast station making it totally unreadable (DR)
7320 M8 cut no's CW stn in tfc Fri 01-15-99 1315Z (BR)
7337 LP E3 2001 011298 USB YL/EE very weak id from tune
7337 //9251//12603 LP (E3) 1908 (122198) USB id 38810 (DR)
7337 //9251 LP (E3) 2108 (122298) USB id 38810 nothing on 12603 (DR)
7337 //9251 LP (E3) 1608 (123098) USB id 29388 nothing heard on
12603 (DR)
7337 //9251 LP (E3) 2202 (123198) USB id 48632 (DR)
7380 M10 1700 122998 CW 555x3 491x3 23 086x3 14 (VM)
7425 M17 We 1/13/99 0900 53463 24 = (GD2)
7469 M12 0710 011199 691x3 1 6417 143 (VM)
7469 M12 0540 123098 CW 691x3 1 4568 145 (VM)

7469 M12 0716 011399 CW In progress (VM)
7473 E5 2100 122998 ID 095 (VM)
7473 M51 0748 010899 CW "NR 38 J 08 08:49:15 1999" (VM)
7519 M8 0412 123098 CW In progress (VM)
7519 M8 0400 CW TMGNA MAIAD MNAAN (Sun) 10 Jan 99 (LBJ)
7525 BACKWARDS MUSIC STATION (XM) 0817Z (12.10.98) USB in progress (SD)
7554 M8 1400 CW TTTWN GRINA ITTMA (Wed) 13 Jan 99 (LBJ)
7555 V2 0304 AM (In tfc - Sun) 16 Jan 99 (LBJ)
7555 Atencion/V2 0300 Sun 1/10/99 YL/SS rptg A 91809 58081 83381 5FG (JM4)
7573 BACKWARDS MUSIC STATION (XM) 0510Z (12.10.98) USB in progress (SD)
7580 M8 Th 1/14/99 1000 96542 05862 06981 (GD2)
7580 M8 Thu 1/7/99 1000 91711 29013 20543 (GD2)
7583 Atencion/V2 0200 Wed 1/13/99 YL/SS rptg A 91809 89461 96151 5FG (JM4)
7583 SPANISH LADY (V2) 1038Z (19.10.98) AM in progress (SD)
7585 //9219 TCS (E5) 1706 (010599) USB id 064 count 109 (DR)
7585 TCS (E5) 1703 (010699) USB id 064 (DR)
7585 TCS (E5) 1703 (011399) USB id 064 (DR)
7585 //9219 TCS (E5) 1701 (122298) USB id 064 count 109 (DR)
7585 //9219 TCS (E5) 1700 (122398) USB id 064 count 109 very strong sig (DR)
7585 //9219 TCS (E5) 1705 (122998) USB id 064 count 109 (DR)
7585 //9219 TCS (E5) 1706 (123098) USB id 064 count 109 (DR)
7593 M31 2255 CW VVV DE FDI8 AR (Sat) 9 Jan 99 (LBJ)
7600 //10597 TCS(E5) 1502 (010199) USB id 169 (DR)
7600 //10597 TCS (E5) 1509 (010599) USB id 169 count 162 (DR)
7600 //10597 TCS (E5) 1507 (010899) USB id 169 count 162 (DR)
7600 //10597 TCS/E5 1500 Fri 1/8/99 YL/EE rptg 169 Count 162 3/2FG (JM4)
7600 //10597 TCS (E5) 1501 (122298) USB id 169 count 162 (DR)
7600 //10597 TCS (E5) 1502 (122598) USB id 169 count 162 (DR)
7600 //10597 TCS (E5) 1508 (122998) USB id 169 count 162 (DR)
7620 TCS (E5) 2102 (010699) USB id 981 count 77 (DR)
7620 TCS (E5) 2103 (122398) USB id 246 count 184 (DR)
7620 TCS (E5) 2105 (123098) USB id 246 count 184 (DR)
7628 V2 1106 AM (In Tfc - Wed) 6 Jan 99 (LBJ)
7653 M12 1720 120998 CW 749x3 1 2853 140 (VM)
7680 M8 Sat 1/9/99 0800 39322 91811 30381 (GD2)
7680 M8 0400 CW TNRDD IMUTN RDUTN (Mon) 4 Jan 99 (LBJ)
7680 M8 0405 CW (In Tfc - Tue) 5 Jan 99 (LBJ)
7681 Atencion/V2 0200 Wed 1/13/99 YL/SS w/transmitter problems distorting whole broadcast. (JM4)
7726 V2 0544 123098 In progress (VM)
7726 SPANISH LADY (V2) 0507Z (28.10.98) AM in progress (SD)
7753 Spanish Man (V7) 2005 (122898) AM id ??3 Null msg format fairly weak (DR)
7760 MOSSAD/E10 0100 Mon 1/4/99 YL/EE rptg ULX 5LG. (JM4)

7775 English Man/E6 (null broadcast) OM/YL/EE rptg 149 149 149 00000.
Down at :18. (JM4)
7796 M23 Th 1/14/99 1600 246 = 37 37 = (GD2)
7796 M23 We 1/13/99 1030 082 = 40 40 = (GD2)
7796 M23 We 1/13/99 1600 242 = 40 40 = (GD2)
7796 M23 Mo 1/11/99 1030 666 = 57 57 = (GD2)
7796 M23 Mo 1/11/99 1600 880 = 80 80 = (GD2)
7796 M23 Tue 1/12/99 1030 406 = 43 43 = (GD2)
7796 M23 We 1/6/99 1600 880 = 80 80 = (GD2)
7796 M23 Thu 1/7/99 1030 406 = 43 43 = (GD2)
7796 M23 Frid 1/8/99 1030 082 = 40 40 = (GD2)
7796 M23 Frid 1/8/99 1600 802 = 39 39 = (GD2)
7796 M23 Tue 1/12/99 1600 080 = 32 32 = (GD2)
7796 M23 Tue 1/5/98 1030 882 = 74 74 = (GD2)
7810 //10125 Isr. intel. (E10a) 1545 (122398) USB id CI02 (DR)
7810 //10125 Isr. intel. (E10a) 1546 (122498) USB id CI02 (DR)
7836 TCS/E5 1400 USB 295(x3) 1234567890 (Fem/ee - Sun) 17 Jan 99 (LBJ)
7840 M3 Frid 1/8/99 1100 508/00 (GD2)
7845 M8 Tue 1/12/99 1100 91673 56702 69103 (GD2)
7846 M8 1100 CW IRNGN NMTAA UWUNN (Tue) 5 Jan 99 (LBJ)
7887 Atencion/V2 0200 Sun 1/10/99 YL/SS rptg A 91809 58081 83381 5FG.
(JM4)
7889 M8 1405 CW (In tfc - Sun - new sked for me) 17 Jan 99 (LBJ)
7890 M8 cut no's CW stn in tfc Tue 01-12-99 1305Z (BR)
7890 M8 cut no's CW stn in tfc Thu 01-14-99 1315Z (BR)
7890 M8 1321 CW (In tfc - Sat) 9 Jan 99 (LBJ)
7912 M12 1840 122998 CW In progress. 996x3 2 2nd msg: 9572 215 (VM)
7916 Six Notes (X6) 1624 (010699) AM In progress, an E10 was sending
a msg on about the same frequency (DR)
7918 MOSSAD/E10 0200 Tue 1/12/99 YL/EE rptg YHF 5LG. (JM4)
7918 MOSSAD/E10 0200 Wed 1/13/99 YL/EE rptg YHF 5LG. (JM4)
7918 MOSSAD/E10 0200 Thu 1/7/99 YL/EE rptg YHF 5LG. (JM4)
7918 MOSSAD/E10 0200 Fri 1/8/99 YL/SS rptg YHF 5LG. (JM4)
7918 E10 Mossad 1605 010399 AM ongoing msg. 5lg by yl in e (JRU)
7918 MOSSAD/E10 0200 Mon 1/4/99 YL/EE rptg YHF 5LG. (JM4)
7918 MOSSAD/E10 0200 Tue 1/5/99 YL/EE rptg YHF 5LG. (JM4)
7931.5 M76 1205 CW AY7S DE 1LLZ K (Was in 5 ltr tfc - bar ltrs - very
strong arctic flutter on the signal - Fri) 8 Jan 99 (LBJ)
8010 M8 1102 CW (In tfc - Thurs) 14 Jan 98 (LBJ)
8010 M8 1100 CW WMGRN NMUDA NDDDA (Thurs) 7 Jan 99 (LBJ)
8012 V2 0538 011199 In progress (VM)
8025 MOSSAD (E10) 0554Z (16.11.98) USB id MIW2 (SD)
8030 English Man (E6) 1501 (122398) AM id 924 key 605 gc 81 00000
at 1518 (DR)
8030 English Man (E6) 1500 (122498) AM id 924 key 605 gc 81 00000
at 1518 repeat of 23/12 (DR)
8033 Russian Man (S6) 1601 (122698) AM sked 805 Null msg format (DR)
8066 M8 1100 CW AUGMD TWGRD TRMGN (Fri) 15 Jan 99 (LBJ)

8067 M8 1100 CW TMGND DTGMA WRITA (Mon) 11 Jan 99 (LBJ)
8067 M8 Mo 1/11/99 1100 09893 30891 56701 (GD2)
8067 M8 We 1/6/99 1100 59861 79403 20524 (GD2)
8067 M8 1100 CW WMGRD MAIAN WNIRA (Fri) 8 Jan 99 (LBJ)
8067 M8 1059 CW (Early Start - right into tfc - Sun) 3 Jan 99 (LBJ)
8067 M8 1100 CW WMGRA IMUTD NTWUN (Wed) 6 Jan 99 (LBJ)
8070 M31 2320 CW VVV DE FDI8 AR (Mon) 4 Jan 99 (LBJ)
8085 //9219 TCS (E5) 1707 (010499) USB id 469 count 47 (DR)
8085 //9219 TCS (E5) 1820 (010699) USB In progress (DR)
8085 //9219 TCS (E5) 1706 (010799) USB id 469 count 47 (DR)
8085 TCS E5 msg 026 count 102? vy weak //9219 mon 01-11-99 1900Z (BR)
8085 //9219 TCS (E5) 1706 (010799) USB id 469 count 47 (DR)
8087 M8 Sun 1/10/99 1100 09822 91671 52762 (GD2)
8125 //9219 TCS (E5) 1701 (010199) USB id 434 count 165 (DR)
8125 //9219 TCS (E5) 1705 (010399) USB id 434 count 165 (DR)
8125 //9219 TCS (E5) 1704 (010899) USB id 434 count 165 (DR)
8125 //9219 TCS (E5) 1709 (011099) USB id 037 count 135 (DR)
8125 //9219 TCS (E5) 1700 (011799) USB id 010 (DR)
8125 //9219 TCS (E5) 1709 (011099) USB id 037 count 135 (DR)
8125 TCS E5 1708 011099 USB YL/EE id 037 count ?? very weak signal
8125 //9219 TCS (E5) 1700 (122098) USB id 480 count 114 (DR)
8125 //9219 TCS (E5) 1702 (122798) USB id 434 count 165 (DR)
8125 E5 TCS 1700 010399 USB ID: 434 // 9219 (JRU)
8127 Isr. intel. (E10a) 1506 (010699) USB id MIW2 cont., stopped
with 'MIKE' at 1515 (DR)
8127 Isr. intel. (E10a) 1430 (010799) USB id MIW2 cont., stopped
before 1520 (DR)
8127 Isr. intel. (E10a) 0605 (010899) USB id MIW2 cont. (DR)
8127 mossad E10 1505 011299 USB YL/EE MIW 2 //6145//5230
8127 MOSSAD (E10) 1515Z (01.11.98) USB id KPA2 (SD)
8127 Isr. intel. (E10a) 1506 (010699) USB id MIW2 cont., stopped
with 'MIKE' at 1515 (DR)
8127 Isr. intel. (E10a) 1430 (010799) USB id MIW2 cont. stopped
before 1520 (DR)
8127 Isr. intel. (E10a) 0605 (010899) USB id MIW2 cont. (DR)
8144 Russian Man (S7?) 1432 (010699) AM In progress, 4FGx1, 000 000
at 1435 with no decode key or group count (DR)
8163 M12 2000 122698 CW 578x3 000 (VM)
8166 M8 1100 CW NUGWD MTDGD NTWUA (Tue) 5 Jan 99 (LBJ)
8173 M12 0821 122498 CW In progress (VM)
8173 M12 Thu 1/7/99 0810 749x3 2385 146 (GD2)
8176 SPANISH LADY (V2) 0725Z (25.10.98) USB QRM Sydney Radio VIS
evening sked and commented upon by operator when trying to
communicate with yacht "Galaxy III" (SD)
8176 English Man (E6) 1334 (122298) AM In progress key 359 gc 146
00000 at 1344 (DR)
8186 M8 1100 CW MAIAA NMTAD NTWUD (Thurs) 7 Jan 99 (LBJ)
8187 M8 Sat 1/9/99 1100 09821 29432 52762 (GD2)

8187 M8 1100 CW TMGNA NMUDN WNIRN (Sat) 9 Jan 99 (LBJ)
8188 Swedish Rhapsody (E23) 1219 (010499) USB In progress, finished
with 'END' at 1240 (DR)
8188 Swedish Rhapsody (E23) 1236 (010699) USB In progress, finished
with 'END' at 1240 (DR)
8188 Swedish Rhapsody (E23) 1205 (010799) USB In progress (DR)
8188 M4 Th 1/14/99 1157 UR3 LO Lox3/60783 (GD2)
8188 M4 Mo 1/11/99 1157 U R3 Lo Lox3/60783 (GD2)
8188 SWEDISH RHAPSODY (E23) 1210Z (04.11.98) USB in progress (SD)
8188 SWEDISH RHAPSODY (E23) 1157Z (18.11.98) USB w/ call up 11111,
22222, etc x3 (SD)
8188 SWEDISH RHAPSODY (E23) 1157Z (07.12.98) USB w/ call up 11111,
22222, etc x3 (SD)
8188 SWEDISH RHAPSODY (E23) 1213Z (21.12.98) USB in progress (SD)
8188 SWEDISH RHAPSODY (E23) 1213Z (04.01.99) USB w/ call up 11111,
22222, etc x3 some 2s missing during call-up (SD)
8188 Swedish Rhapsody (E23) 1205 (010799) USB In progress (DR)
8188 Swedish Rhapsody (E23) 1201 (122398) USB In progress (DR)
8188 Swedish Rhapsody (E23) 1005 (122898) AM In progress (DR)
8190 Czech Lady 'Control' (S17) 1250 (010499) USB msg group 87032
or 87062, excellent signal here in northern England, much
better than on previous frequency, Konec Konec at 1257 (DR)
8190 //9385 Czech Lady 'Control' (S17) 1252 (010599) USB msg
group: 76031 I think S17two.wav (DR)
8190 //9385 Czech Lady 'Control' (S17) 1250 (010699) USB msg
group: 95042 (DR)
8190 //9385 Czech Lady 'Control' (S17) 1250 (010799) USB msg
group: 88027 (DR)
8190 //9385 Czech Lady 'Control' (S17) 1250 (010999) USB msg
group: 79030 (DR)
8190 //9385 Czech Lady 'Control' (S17) 1250 (010799) USB msg
group: 88027 (DR)
8190 //9385 Czech Lady 'Control' (S17) 1252 (010599) USB msg
group: 76031 (DR)
8191 M12 0700 122298 CW 963x3 1 (VM)
8191 M12 0700 010699 CW 963x3 1 5626 84 (VM)
8191 M12 0700 122398 CW 963x3 1 7194 84 (VM)
8300 New Star Broadcasting (V13) 1505 (010599) AM In progress (DR)
8300 New Star Broadcasting (V13) 1230 (010699) AM Started with tune (DR)
8300 new star radio V13 1605 011199 USB YL/CC (JD)
8300 New Star broadcasting (V13) 1505 (010599) AM In progress (DR)
8307 M23 Sun 1/10/99 1400 579 R10 // 9285 (GD2)
8307 M23 Mo 1/11/99 0800 579 R10 // 9285 (GD2)
8307 M23 Sun 1/3/99 0800 579 R10 // 9285 (GD2)
8307 M23 Tue 1/5/98 0800 579 R10 // 8285 (GD2)
8464 LP E3 1503 011299 USB YL/EE id 69768 //10426//7755
8464 LP E3 1906 010999 USB YL/EE id 67968 //6485
8464 //10426//11545 LP (E3) 1609 (122098) USB id 18172 (DR)

8464 //10426//11545 LP (E3) 1602 (122798) USB id 18172 (DR)
8464 //12603//14487 LP (E3) 1606 (123198) USB id 39164 (DR)
8532 Atencion/V2 (old version) 0200 Thu 1/7/99 YL/SS 5FGF in
progress. At :07, two final, then 230 01 and 01 51 and back
into 5FG. Down at :13 w/two final. (JM4)
9024 Atencion/V2 (old version) 0208 Wed 1/13/99 YL/SS rptg 616/06
and 06/41 then 5FG. Two final at :14, then 616/06 and 06/41
call-up again and back into 5FG. Down at :20 w/two final. (JM4)
9052 SPANISH MAN (V7) 0604Z (01.12.98) USB call-up 024 id 2826 48 (SD)
9052 SPANISH MAN (V7) 0600Z (29.12.98) USB call-up 024 null msg (SD)
9063 Atencion/V2 0200 Thu 1/14/99 Late start-up. YL/SS rptg 55333
and immediately into 5FG text. (JM4)
9063 Atencion/V2 0200 Thu 1/7/99 YL/SS 5FG in progress. (JM4)
9070 TCS (E5) 1814 (011699) USB In progress (DR)
9070 TCS (E5) 1801 (122198) USB id 641 count 136 (DR)
9070 TCS (E5) 1800 (122898) USB id 641 count 136 unable to find
parallel freq (DR)
9090 TCS E5 msg 295 count 97 // 7836 Mon 01-18-99 2000Z (BR)
9130 mossad E10 1919 010999 USB YL/EE 5 letter groups
9130 mossad E10 2007 011099 USB YL/EE 5 letter groups
9130 Isr. intel. (E10a) 1600 (122098) USB id EZI2 (DR)
9130 Isr. intel. (E10) 1730 (122098) USB id EZI 2 msgs 1st group
83 2nd group 44 (DR)
9153 SPANISH LADY (V2) 0510Z (28.10.98) AM in progress (SD)
9219 //10423 TCS (E5) 1608 (010399) USB id 613 count 44 (DR)
9219 //10423 TCS (E5) 1602 (011799) USB id 399 count 152 (DR)
9219 //10423 TCS (E5) 1601 (122098) USB id 949 count 167 (DR)
9219 //10423 TCS (E5) 1604 (122498) USB id 949 count 184 (DR)
9219 //10423 TCS (E5) 1601 (122798) USB id 949 count 167 (DR)
9219 //10423 TCS (E5) 1607 (123198) USB id 814 count 88 strong
9219 E5 TCS 1600 010399 USB 1234567890-count, ID: 613, 3/2
fg in e, //10423 (JRU)
9219 E5 TCS 1701 010499 USB 123... count, ID: 469 (or 463, can't
read my handwriting in the logbook anymore) (JRU)
9230 SPANISH LADY (V2) 1000Z (26.10.98) AM id 728 03 (SD)
9251 LP E3 1805 011199 USB YL/EE id 46925 //7337 (JD)
9251 LP E3 1902 011199 USB YL/EE id 21803 //7337 (JD)
9251 LP E3 2111 011299 USB YL/EE 5 fig groups //7337
9251 LP (E3) 2030Z (25.10.98) USB in progress (SD)
9251 LP (E3) 2200Z (08.12.98) USB id 36610 (SD)
9251 LP E3 1804 011099 USB YL/EE id 21803 //7337//12603
9251 LP E3 2103 011099 USB YL/EE id 20940 //6959//5746
9272 M3 We 1/6/99 1100 186/00 (GD2)
9385 Czech Lady 'Control' (S17) 1250 (011699) USB msg group: 80029(DR)
9454 M10 Mo 1/11/99 1500 555x3 434x3 23 (GD2)
10125 //14750 Isr. intel. (E10a) 1445 (122398) USB id CI02 (DR)
10125 //14750 Isr. intel. (E10a) 1445 (122498) USB id CI02 (DR)
10223 TCS (E5) 1231Z (14.10.98) USB in progress (SD)

10223 TCS (E5) 1200Z (21.10.98) USB id 240 count 215 (SD)
10223 TCS (E5) 1200Z (28.10.98) USB id 240 count 215 (SD)
10240 English Man? (E6?) 1505 (010499) USB? In progress key 163 gc51
00000 at 1510 10240Unk.wav (DR)
10240 English Man (E6) 1502 (122098) AM? In progress key 914 gc 24
00000 at 1505 (DR)
10252 SPANISH MAN (V7) 0620Z (01.12.98) AM call-up 024 id 2826 48 (SD)
10252 SPANISH MAN (V7) 0610Z (01.12.98) AM call-up 024 null msg (SD)
10252 SPANISH MAN (V7) 0610Z (10.12.98) AM call-up 024 null msg (SD)
10252 SPANISH MAN (V7) 0610Z (29.12.98) AM call-up 024 null msg (SD)
10270 M3 Tue 1/5/98 0900 503/00 (GD2)
10275 English Man (E7) 1345 (121998) AM sked 624 Null msg format (DR)
10352 mossad E10 1449 011299 USB YL/EE CIO 2
10423 TCS E5 msg 901 count 80 (vy weak) Sun 01-10-99 1600Z (BR)
10423 TCS/E5 1600 Thu 1/7/99 YL/EE extremely weak. (JM4)
10426 //11545//14487 LP (E3) 1400 (011699) id 90558 (DR)
10426 E3 LP 1601 010399 USB tune, ID: 41935, // 11545, 8464 (JRU)
10584 KUL FAPSI RTTY stn 1/348 msg Mon 01-11-99 1421Z (BR)
10597 TCS E5 1502 011299 USB YL/EE id 169 count 162 //7600
10642 Slovak Man (S10e) 1300 (011499) USB Headers: 53029 73600 41504
24563 000 at 1323 (DR)
10642 Slovak Man (S10e) 1300 (011599) USB Headers: 10793 18367 54866
24316 000 at 1323 (DR)
10642 Slovak Man (S10e) 1300 (011699) USB Headers: 46493 62522 09628
36608 000 at 1323 (DR)
10642 Slovak Man (S10e) 1300 (011799) USB Headers: 52671 39884 41097
80221 000 at 1323 (DR)
10642 Slovak Man (S10E) 1312 (121998) USB In progress 000 at 1323 (DR)
10642 Slovak Man (S10E) 1310 (122098) USB In progress 000 at 1323 (DR)
10720 M3 Tue 1/12/99 0900 503/00 (GD2)
11072 TCS (E5) 1823 (010399) USB In progress (DR)
11072 //13465 TCS (E5) 1800 (010799) USB id 365 (DR)
11072 TCS E5 1803 011099 USB YL/EE id 365 count 127
11072 //13465 TCS (E5) 1800 (010799) USB id 365 (DR)
11072 TCS (E5) 1804 (122098) USB id 191 count 77 (DR)
11072 //13465 TCS (E5) 1800 (122798) USB id 365 count 127 (DR)
11072 //13465 TCS (E5) 1803 (123198) USB id 365 count 127 (DR)
11072 E5 TCS 1801 010399 USB ID: 365 (JRU)
11270 russian man control S25 0835 011899 USB OM/RR 615 (x3) 60221 (JD)
11270 RUSSIAN MAN CONTROL (S25) 0823Z (07.12.98) USB id 615 msg 80530
& 83950 (SD)
11270 russian man control S25 0837 010499 USB OM/RR 615 (x3) 83040
11452 SPANISH MAN (V7) 0640Z (01.12.98) AM call-up 024 id 2826 48 (SD)
11452 SPANISH MAN (V7) 0644Z (17.12.98) AM call-up 024 id 1327 62 (SD)
11495 ENGLISH MAN (E6) 1320Z (11.10.98) USB id 685 grp cnt 44 ends
w/ 00000 (SD)
11545 //12603//13375 LP (E3) 1404 (011799) id 22540 (DR)
11545 //13375//15682 LP/E3 1600 Tue 1/19/99 YL/EE rptg 66223 5FGx2(JM4)

11545 LP E3 1602 011199 USB YL/EE id 07352 //12603//13375 (JD)
 11545 LP E3 1706 011199 USB YL/EE id 41935 //6599//8464 (JD)
 11545 LP E3 1604 011299 USB YL/EE id51394 //13375//15682
 11545 LP E3 1503 010999 USB YL/EE id 46925 //12603//13375
 11545 LP E3 1602 010999 USB YL/EE id 21803 //12603//13375
 11545 //12603//13375 LP/E3 1500 Thu 1/7/99 YL/EE rptg 49871 5FGx2. (JM4)
 11545 //12603//13375 LP/E3 1500 Fri 1/8/99 YL/EE rptg 21803 5FGx2. (JM4)
 11545 //14487//16084 LP (E3) 1507 (122398) USB id 39164 (DR)
 11545 //12603//13375 LP (E3) 1505 (122498) USB id 90497 (DR)
 11545 //12603//13375 LP (E3) 1509 (122698) USB id 48632 (DR)
 11545 //12603//13375 LP (E3) 1700 (122798) USB id 48632 (DR)
 11545 //14487//16084 LP (E3) 1509 (123098) USB id 39164 no jamming (DR)
 11545 //12603//13375 LP (E3) 1506 (123198) USB id 90497 no jamming (DR)
 11545 E3 LP 1503 010399 USB tune, ID: 54654, 5fg y1 in e // 12603,
 13375 (JRU)
 11545 E3 LP 1702 010399 USB tune, ID: 46925, 5fg y1 in e // 12603,
 13375 (JRU)
 11545 E3 LP 1702 010499 USB ID: 41935 // 8464, 6959 (JRU)
 11565 MOSSAD (E10) 0606Z (02.12.98) USB in progress (SD)
 11565 MOSSAD (E10) 0600Z (07.12.98) USB id EZI2 (SD)
 11565 MOSSAD (E10) 0624Z (08.12.98) USB in progress w/ rpt msg grp
 156 cut off at 0625Z (SD)
 11565 MOSSAD (E10) 0630Z (08.12.98) USB id EZI2 (SD)
 11565 MOSSAD (E10) 0630Z (08.12.98) USB in progress //13533 (SD)
 11637 GMN FAPSI RTTY stn - test - no tfc Sat 01-09-99 0047Z (BR)
 12193 KUL FAPSI RTTY stn 1/348 msg Mon 01-11-99 1410Z (BR)
 12603 //14487//16314 LP (E3) 1405 (010599) USB id 20940 (DR)
 12603 //14487 LP/E3 1600 Thu 1/14/99 YL/EE rptg 20940 5FGx2. (JM4)
 12603 //14487 LP/E3 1600 Thu 1/7/99 YL/EE rptg 20940 5FGx2. (JM4)
 12603 //14487//16475 LP (E3) 1806 (123198) USB id 71946 station
 noticeably weaker (DR)
 12603 E3 LP 1803 010399 USB tune, ID: 21803, 5fg y1 in e //7337,
 9251 (JRU)
 13362 Polytone Station (XP) 0720 (010899) AM Finished at 0726 (DR)
 13362 XPH 0720 011299 433x3 1 01765 00185 (VM)
 13362 Polytone Station (XP) 0720 (010899) AM Finished at 0726 (DR)
 13452 //15478 TCS/V5 0100 Fri 1/8/99 YL/SS rptg 117 Grupo 180 3/2FG(JM4)
 13505 Six Notes (X6) 1416 (010399) AM In progress, same tone
 sequence as Tx on 16223, finished with a short beep at 1422(DR)
 13533 Isr. intel. (E10a) 1432 (122098) USB id EZI2 (DR)
 13555 TCS (E5) 1400 (010199) USB id 580 (DR)
 13555 TCS (E5) 1410 (010399) USB id 580 count 215 (DR)
 13555 TCS (E5) 1413 (010899) USB In progress (DR)
 13555 TCS (E5) 1405 (122598) USB id 580 count 215 unable to find
 parallel freq (DR)
 13555 TCS (E5) 1403 (122798) USB id 580 count 215 unable to find
 parallel freq (DR)
 13556 HZW FAPSI RTTY stn 1/3 msg Mon 01-18-99 2007Z (BR)

13906 //15732 TCS (E5) 1206 (010699) USB id 352 count 215 (DR)
13906 TCS (E5) 1228Z (14.10.98) USBC in progress (SD)
13906 TCS (E5) 1201Z (21.10.98) USBC id 032 count 215 (SD)
13906 TCS (E5) 1200Z (28.10.98) USBC id 783 count 215 (SD)
13906 TCS (E5) 1200Z (01.11.98) USBC in progress (SD)
13906 TCS (E5) 1205Z (04.11.98) USBC id 597 count 215 (SD)
13906 TCS (E5) 1200Z (29.11.98) USBC id 593 count 215 (SD)
13906 TCS (E5) 1205Z (13.12.98) USBC id 612 count 215 (SD)
13906 TCS (E5) 1200Z (20.12.98) USBC id 617 count 215 //15732 (SD)
13906 TCS E5 1201 010699 USB YL/EE id 352 count 215 //15732
13906 //15732(?) TCS (E5) 1205 (123098) USB id 352 count 215? very
very weak on 15732 (DR)
14362 XPH 0740 010899 433x3 2 01765 00185 07052 00079 (VM)
14487 //15682//16084 LP (E3) 1305 (010699) USB id 99970 14487 +
16084 jammed (DR)
14487 LP E3 1202 011899 USB YL/EE id 12851 //15682 (JD)
14487 LP (E3) 1205Z (28.10.98) USB id 51315 //15682//16084 (SD)
14487 LP (E3) 1205Z (29.11.98) USB id 44053 //15682//16084 (SD)
14487 LP E3 1204 010699 USB YL/EE id 46925 //15682//16084
14487 //15682//16084 LP (E3) 1408 (122398) USB id 90497 nothing on
14487 until 1411 (DR)
14487 //15682//16084 LP (E3) 1207 (123198) USB id 48632 14487 +
16084 jammed (DR)
14487 //15682//16084 LP (E3) 1307 (123198) USB id 29388. 14487
heavily jammed (DR)
14487 //15682//16084 LP (E3) 1407 (123198) USB id 38810 no
jamming (DR)
14487 LP E3 1203 010499 USB YL/EE id 46925 //15682//16084
14577 TCS (E5) 1201 (010699) USB id 259 count 215 (DR)
14590 Six Notes (X6) 1400 (010399) AM In progress X6two.wav (DR)
14731 BPA FAPSI RTTY stn 46's - no tfc Mon 01-11-99 1515Z (BR)
14731 BPA FAPSI RTTY stn 46's at 50 baud Sat 01-09-99 1506Z (BR)
14739 //16198 TCS (E5) 1303 (010199) USB id 878 count 215 (DR)
14739 //16198 TCS (E5) 1331 (010299) USB In progress (DR)
14739 //16198 TCS (E5) 1309 (010599) USB id 878 count 215 (DR)
14739 //16198 TCS (E5) 1300 (010899) USB id 878 (DR)
14739 //16198 TCS (E5) 1306 (010999) USB id 878 count 215 (DR)
14739 //16198 TCS (E5) 1301 (122598) USB id 878 count 215 (DR)
14739 //16198 TCS (E5) 1303 (122698) USB id 878 count 215 (DR)
14739 //16198 TCS (E5) 1301 (122998) USB id 878 count 215 (DR)
14750 Isr. intel. (E10a) 1348 (122398) USB id CI02 (DR)
14890 russian man control S25 0808 011899 USB OM/RR 615 (x3)
66541 (JD)
14890 RUSSIAN MAN CONTROL (S25) 0800Z (19.10.98) USB id 615
msg 67566 & 69436 (SD)
14890 RUSSIAN MAN CONTROL (S25) 0800Z (23.11.98) USB id 615 but
very weak (SD)
14890 RUSSIAN MAN CONTROL (S25) 0807Z (30.11.98) USB id 615 msg

94505 & 99125 (SD)
 14890 russian man control S25 0807 010499 USB OM/RR 615 (x3) 85760
 14941 WNY FAPSI RTTY stn 1/252 msg Mon 01-18-99 1810Z (BR)
 15980 MOSSAD (E10) 1238Z (14.10.98) USB in progress (SD)
 15980 MOSSAD (E10) 1332Z (19.12.98) USB id EZI2 (SD)
 15980 Isr. intel. (E10a) 1331 (122698) USB id EZI2 (DR)
 15980 Isr. intel. (E10) 1132 (122898) USB id EZI group 8 (DR)
 16086 //21811 TCS (E5) 1104 (122998) USB id 010 count 215 very weak
 QRM off broadcast station on 21811 (DR)
 16086 TCS (E5) 1103 (123198) USB id 010 count 215 very weak (DR)
 16120 English Man (E6) 1304 (122898) AM In progress key 728 gc 34
 00000 at 1310 (DR)
 16120 English Man (E6) 1300 (122998) AM id 659 key 728 gc 34 (DR)
 16198 TCS (E5) 1601 (010299) USB id 186 count 145 very weak (DR)
 16198 TCS (E5) 1608 (010699) USB id 048 count 209 very weak (DR)
 16218 HZW FAPSI RTTY stn 1/3 msg Mon 01-18-99 2000Z (BR)
 16223 Six Notes (X6) 1402 (010399) AM in progress, different tone
 sequence to the one in progress on 14590, stronger signal,
 finished at 1412 X6one.wav (DR)
 17410 Isr. intel. (E10a) 1532 (010199) USB id EZI2 ended at 1533 (DR)
 17410 mossad E10 1107 122598 USB YL/EE 5 letter groups
 17410 mossad E10 1103 010499 USB YL/EE EZI
 17499 //22108 CR (E4) 1301 (010199) USB id 29652 (DR)
 17499 //22108 CR (E4) 1308 (010599) USB In progress (DR)
 17499 //23461 CR (E4) 1202 (010699) USB id 19400 (DR)
 17499 //22108 CR (E4) 1307 (010599) USB id 89913 (DR)
 17499 //23461 CR (E4) 1106 (010899) USB id 80683 (DR)
 17499 //23461 CR (E4) 1206 (010899) USB id 89913 (DR)
 17499 //22108 CR (E4) 1302 (122598) USB id 32815 (DR)
 17499 CR (E4) 1100Z (13.10.98) USB id 78873 //23461 (SD)
 17499 CR (E4) 1211Z (28.10.98) USB in progress (SD)
 17499 CR (E4) 2301Z (01.12.98) USB id 83374 //22108 (SD)
 17499 CR (E4) 0001Z (26.10.98) USB id 87416 //22108 (SD)
 17499 //22108 CR (E4) 1307 (010599) USB id 89913 (DR)
 17499 CR/E4 2300 Thu 1/7/99 YL/EE rptg 70120 5FGx2. (JM4)
 17499 CR/E4 0000 Fri 1/8/99 extremely weak. (JM4)
 17499 //23461 CR (E4) 1100 (122398) USB id 36540 23461 is very
 strong sig (DR)
 17499 //23461 CR (E4) 1202 (122398) USB id 16149 23461 is very
 strong sig (DR)
 17499 //23461 CR (E4) 1204 (122498) USB id 69640 (DR)
 17499 //23461 CR (E4) 1100 (122598) USB id 69640 (DR)
 17499 //23461 CR (E4) 1201 (122598) USB id 79160 (DR)
 17499 //22108 CR (E4) 1302 (122598) USB id 32815 (DR)
 17499 //23461 CR (E4) 1105 (122898) USB id 41620 (DR)
 17499 //23461 CR (E4) 1205 (122898) USB id 84080 (DR)
 17499 CR/E4 0100 Mon 1/4/99 YL/EE rptg 29652 5FGx2. (JM4)
 17499 //22108 CR (E4) 1308 (010599) USB In progress (DR)

18000 phonetic alphabet E15 1100 010699 USB YL/EE OM/EE BEC QRU
 18000 phonetic alphabet E15 1103 122498 USB OM/EE BEC QRU
 18000 phonetic alphabet E15 1100 010499 USB OM/EE BEC QRU
 19088 WNY FAPSI RTTY stn 1/252 msg Mon 01-18-99 1800Z (BR)
 19884 //21886 CR (E4) 1007 (122898) USB id 47767 (DR)
 20474 CR (E4) 1034Z (17.11.98) USB in progress //23461 (SD)
 21866 CR (E4) 0107Z (22.12.98) USB id 47767 (SD)
 22108 CR/E4 0000 Tue 1/5/99 YL/EE rptg 29652 5FGx2. Not
 audible on 17499 and diesel-engine jammer on 20474. (JM4)
 23461 CR E4 1001 011899 USB YL/EE id 54501 //20474 (JD)
 23461 CR E4 1107 011899 USB YL/EE id 67985 //17499 (JD)
 23461 CR E4 1201 011899 USB YL/EE id 34308 //17499 (JD)
 23461 CR (E4) 1001Z (04.01.99) USB id 96875 (SD)
 23461 CR E4 1001 010899 USB YL/EE id 19400 //20474
 23461 CR E4 1001 010699 USB YL/EE id 88178 //20474
 23461 CR E4 1101 010699 USB YL/EE id 64570 //17499
 23461 CR E4 1201 010699 USB YL/EE id 19400 //17499
 23461 CR E4 1028 122498 USB YL/EE 5 figure groups //20474
 23461 CR E4 1101 122498 USB YL/EE id 16149 //17499
 23461 CR E4 1003 122598 USB YL/EE id 16149 //20474
 23461 CR E4 1106 122598 USB YL/EE id 69460 //17499
 23461 CR E4 1003 010499 USB YL/EE id 96875 //20474
 23461 CR E4 1201 010499 USB YL/EE id 88178 //17499
 23461 CR E4 1101 010499 USB YL/EE id 70120 //17499

 tn timer to the following contributors:
 #####

BR : Bob Roehrig, Aurora, Illinois, USA
 DR : Darren Riley, UK
 GD2: Guy Denman, UK
 JD : Jonathan Drakes, UK (logs without initials also by john,
 please include your initials in the future, tia)
 JJ : Jimmy James, Oxford, UK
 JM4: John Maky, Parks, Arkansas
 JRU: Jascha Ruesseler, Germany
 LBJ: Jean-Paul LeBlanc, Ontario, Canada
 RP : Rimantas Pleikys, Lithuania
 SD : Simon Deneen, Australia (welcome back !)
 VM : Valeriano Martin, Spain

-o-o-o-o-o-o-o-o-o-o-

The 'Numbers & Oddities' column a.k.a. 'Spooks Newsletter' comes to you
 courtesy of the Worldwide Utility News club. This newsletter may NOT be
 utilized, partly or wholly, in any other media format without the written
 permission of the editor (ary@luna.nl). Any breach of this may result in

action under international copyright legislation.

To become a WUN member, send e-mail to the WUN listserver at:
majordomo@qth.net and in the BODY of the message type: "subscribe wun"
(without the quotation marks).

Check out the WUN web site at: <http://www.gem.net/~berri/wun>

-o-o-o-o-conet-o-o-o-o-